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AUG 16 1950

NEW EQUIPMENT DIGEST

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Volume 15—Number 8

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CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 16 and 48

EQUIPMENT MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

BALL BEARING FLANGE UNIT
for use on small shaft equipment

Featuring metal two-bolt style housing, FED series ball bearing flange unit handles light loads at normal speeds. Precision internal self-aligning ball bearings compensate for shaft deflections and mounting inaccuracies. Labyrinth-type seal minimizes drag and wear. Unit is locked to shaft by headless set screw and standard grease fitting is provided for supplementary lubrication. Made by **Ahlberg Bearing Co.**, 3011 W. 47th St., Chicago 32, Ill.

▲ For more details circle **NED-5400** on enclosed inquiry slip ▲

HOSE CLAMP
has stainless band

Corrosion resistance, strength and attractive appearance of stainless steel band are features of this Aero-Seal worm-drive hose clamp. It is supplied with either screwdriver or thumb grip adjustment. Standard stock sizes range from 7/16 to 4½ in. and larger diameters can be furnished. Made by **Breeze Corps.**, 37 S. Sixth St., Newark 7, N. J.

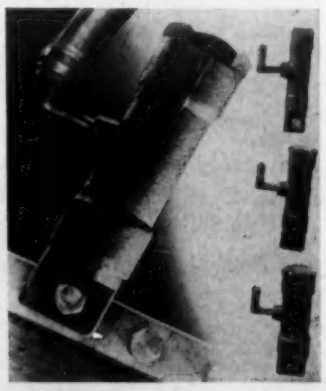
▲ For more details circle **NED-5401** on enclosed inquiry slip ▲

REPLACEABLE AIR FILTER
is of viscous impingement type

Filtering media of these Amer-glas replaceable air filters consist of continuous strands of glass filaments bonded together at each point of contact by high-temperature plastic to form resilient pad. Standard frame sizes are available for forced air, ventilating and air conditioning systems. Odorless nonflammable adhesive, sprayed on pad, traps dust particles. Pads are placed in fiberboard casing between metal grills. Made by **American Air Filter Co.**, 391 Central Ave., Louisville 8, Ky.

▲ For more details circle **NED-5402** on enclosed inquiry slip ▲

PNEUMATIC VIBRATORS
available from stock in eight sizes

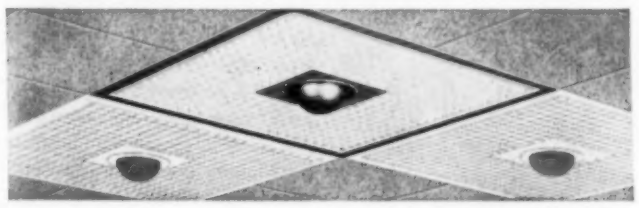


Featuring full-power start and minimum air consumption, series 76 pneumatically-operated vibrators deliver from 2200 to 6000 impacts per minute, depending upon piston diameter and line pressure. Air consumption ranges from 4½ to 8 cu ft per minute at 80-psi line pressure. Piston diameters vary from ½ to 2½ in. Bronze alloy cylinder liner assures positive and permanent piston lubrication. Made by **SPO Inc.**, 6474 Grand Division Ave., Cleveland 5, O.

▲ For more details circle **NED-5403** on enclosed inquiry slip ▲

RECESSED LIGHTING UNIT
has fluorescent-incandescent features

This Silvray Skylike recessed lighting unit combines advantages of silvered-bowl incandescent lighting with modern appearance of fluorescent fixtures. Output can be



varied from 2500 to 10,000 lumens per unit by use of 150, 200 or 300-w lamps, and 90-degree shielding prevents both direct and reflected glare. Silvered reflector is permanently sealed, and light loss from depreciated ceilings eliminated because unit carries its own 87-per cent reflection factor ceiling. Measuring 24 x 24 in., units can be recessed in lines, threes or checkerboard arrangement as well as surface mounted, and are relamped from floor with lamp changer. Distributed by **Graybar Electric Co.**, 420 Lexington Ave., New York 17, N. Y.

▲ For more details circle **NED-5404** on enclosed inquiry slip ▲

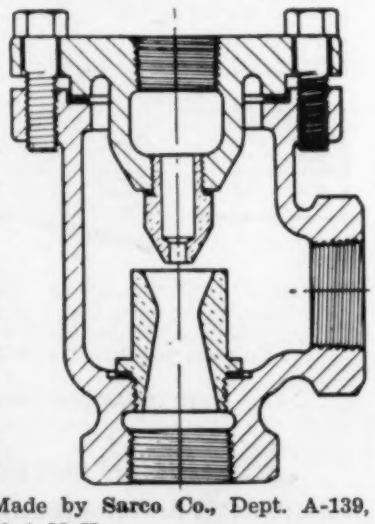
ROUTER-GRINDER
accommodates 18 x 25-in. workpiece

Totally-enclosed Hi-Speed router and grinder is usable for pattern work, match plates, die grinding and routing of plastics, metals and other materials. Operator protection and safety against fire are features. All waste material is funneled into dump cart for easy reclamation. Table size is 18 x 26 in., and clamp capacity is 25 in. Machine has 44-in. width, 52½-in. height and 45-in. overall depth. Made by **J. A. Richards Co.**, Corner Myrtle & Pitcher Sts., Kalamazoo 60F, Mich.

▲ For more details circle **NED-5405** on enclosed inquiry slip ▲

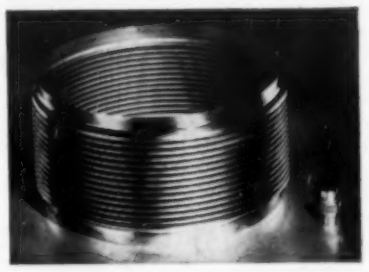
STEAM CIRCULATION SYSTEM
creates turbulent flow of condensate

Steam circulation system consists of float trap and illustrated injector type circulator that utilizes uncondensed steam to induce turbulence in flow of condensate and improve heat transfer and surface temperature. Applications include use on platen presses in plastics and rubber industries, heaters for textile drying machines and tubular heaters of stills and evaporators. Normally, flow of steam and condensate in steam spaces of this type equipment is sluggish. Sarco steam circulation system serves to increase velocity of flow and thus improve overall operating efficiency. Made by **Sarco Co.**, Dept. A-139, 350 Fifth Ave., New York 1, N. Y.



▲ For more details circle **NED-5406** on enclosed inquiry slip ▲

STAINLESS STEEL BELLOWS
complete range of sizes offered



Especially suited for applications of control and instrumentation, these stainless steel bellows can be used where problems of pressure, high and low temperatures and corrosion are factors. They are manufactured in single and multiple-ply construction in various lengths, dependent upon requirements. Bellows or bellows assemblies with standard fittings or fittings to customer's specifications can be supplied. Fittings can be attached by electrical circular seam welding to assure leakproof assemblies. Made by **Chicago Metal Hose Corp.**, 1343 S. Third Ave., Maywood, Ill.

▲ For more details circle **NED-5407** on enclosed inquiry slip ▲

MAGNETIC PARTICLE CLUTCH
controls torque, speed and position

Linking action of dry magnetic mixture in magnetic field between driving and driven parts is utilized by Magneclutch controllable coupling to transmit torque. Magnetic mixture is composed of iron particles and flake graphite. Magnetic field is established by current flowing through coil. By varying current, degree of clutching can be controlled. Design and operating features are use of small control power, extremely fast response, minimum wear on torque transmitting surfaces, torque at zero slip, large maximum to minimum torque ratio and easy adaptation to remote control. Made by **Vickers Inc.**, Vickers Electric Div., Dept. NED, 1815 Locust St., St. Louis 3, Mo.

▲ For more details circle **NED-5408** on enclosed inquiry slip ▲

DRIVE MECHANISMS
for meters, controllers, recorders and apparatus requiring timing

Characterized by "capsulized" escapement mechanism which can be detached for service or replacement, these mechanical drives require less than 2 in. between plane of driven chart and mounting ring. Main arbor fits standard chart hub and is tied directly to mainspring. Drive is self-starting and direction of rotation is optional.

Model 24-1 has 24-hour wind, and torque drops only from 8.6 to 4.7 lb-in. between full wind and 24-hour rundown. Larger model 24-3 has 8-day wind and basic 24-hour rundown. Turrets which snap on main arbor are available to convert to rotations of 2, 3, 4, 6, 8, 12, and 48 hours and 3, 7 and 8 days. Both models wind through hub.

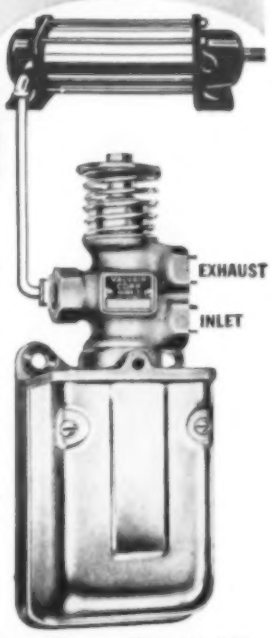
Escapement subassembly controls mainspring action through simple connecting square. Standard escapement delivers one turn of connecting square per hour. Special escapements can be obtained for speeding up chart drives so that indicated ½ or ¼-hour is traversed in only 1 minute. Made by Pittsburgh Equitable Meter Div., **Rockwell Mfg. Co.**, 404 N. Lexington Ave., Pittsburgh 8, Pa.

▲ For more details circle **NED-5409** on enclosed inquiry slip ▲

This **VALVAIR** SOLENOID OPERATED

AIR CONTROL VALVE

is *Sensationally Dependable!*



. . . and its dependability is due to many quality features. *Examples*: the "O-U" packer, no metal seats, heavy solenoid and standard pipe area through valve, permitting unrestricted air flow and preventing pressure loss. Yet Valvairs cost no more.

For use with air, water or oil pressures up to 175 p. s. i.; temperatures up to 120° F. 2-way; piped exhaust — 3-way, 4-way. Also in knob, lever, cam, clevis, foot, treadle, cylinder, diaphragm types.

Sizes: ¼", ⅜", ½", ¾", 1".

★ ★ ★

Ask for Bulletin "A-N".

VALVAIR CORPORATION • 454 Morgan Avenue, Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon **Valvair** 2-WAY 3-WAY 4-WAY

For more details circle NED-5413 on enclosed inquiry slip

TEFLON STOCK

Sheets
Cylinders
Rods
Tubing
Bars

IMMEDIATE DELIVERY

We supply Teflon stock in *any quantity without delay*. Our selection, the most complete in the country, includes many special items, such as unoriented sheet Teflon (starting at 1/16" thickness) in sizes up to 36 x 36"—the largest sheet Teflon offered anywhere.

Teflon, DuPont's new wonder plastic, is unequalled for chemical inertness, adhesion resistance and dielectric strength. Teflon cannot be attacked by nor contaminate any industrial acid, solvent, caustic, oil, gas, etc. It's extremely tough and suitable for temperatures from −150° F. to 550° F. (recommended for higher temp. in some cases). Teflon is the perfect answer to countless product and equipment problems throughout the processing, chemical and electrical industries. Teflon stock is easily machined or cut into whatever parts you need, so whether you're ready for quantity production or merely wish to evaluate, send us your requirements. We can help you cut costs in many ways.

For complete information on Teflon and Teflon stock, write for Catalog No. 300. *We also manufacture Teflon parts, supplying special shapes molded exactly to your specifications.*

Teflon Products Division

UNITED STATES GASKET COMPANY
654 N. 10th Street • Camden, New Jersey

For more details circle NED-5414 on enclosed inquiry slip

NEW 10-ton Industrial Yard Crane

WAYNE CRANE

MODEL 20
MAGNET • CLAMSHELL • DRAGLINE •

A "Husky Housekeeper" for your yard—moves more heavy materials—works in less space. The new Model 20 definitely cuts handling costs. Compare the new Wayne Crane with any machine on the market.

It takes these features to do the trick. Wayne Crane has them:

- One-man operation
- Safety engineered
- 360° operation at full capacity
- Forward or reverse to 15 m.p.h.
- 4-point "walking beam" suspension
- Short wheelbase and turning radius
- Independent swing and travel

Wayne Crane Sales and Service in all Principal Industrial Cities

To Wayne Crane Div., American Steel Dredge Co., Inc.
Fort Wayne 1, Indiana

Lower material yard costs interest us. Let's have the facts about Wayne Crane.

WE HANDLE_____
SIGNED_____
COMPANY_____
STREET_____
CITY_____ STATE_____

Manufacturers of Material Handling Equipment Since 1905

For more details circle NED-5415 on enclosed inquiry slip

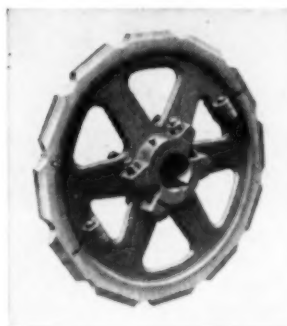
Service for Production

Today's critical world situation adds new significance to NEW EQUIPMENT DIGEST*'s service to you as a reader. Though faced with an impending shortage of skilled labor, you in industry must use every means possible to expedite production. Each month, our editors give you essential 'spot' information on new equipment, materials and methods developed for use in the 42,425 industrial plants we reach. These products plus those advertised offer you solutions to production problems which are constantly arising in your plant. If you have any special equipment needs for which we can suggest sources of supply, feel free to write us.*

A. N. Gregg
EDITOR

NEW EQUIPMENT DIGEST
735 Penton Building
Cleveland 13, Ohio

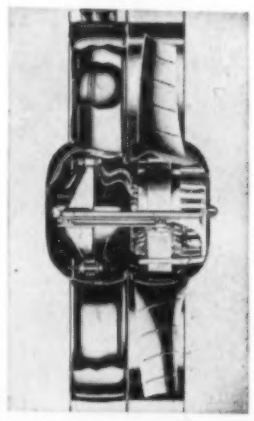
HARDENED-RIM SPROCKETS
are strong and abrasion resistant



Cast integral into rims of these industrial sprockets, Ni-Hard martensitic nickel cast iron provides strength, toughness and abrasion-resistance. Features include long service life of both chain and sprocket with minimum need for maintenance. Made by **Jeffrey Mfg. Co.**, 852-99 N. Fourth St., Columbus 16, O.

For more details circle NED-5416 on enclosed inquiry slip

INDUSTRIAL VENTILATING FAN
designed for low speed operation



Furnished in diameters from 3 to 5 ft with capacities from 11,000 to 30,000 cfm, series 16 industrial ventilating fans provide high performance against moderate static pressures. Direct drive motor is completely enclosed within hub and housing and is equipped with permanently sealed silicone-lubricated ball bearings. Fan is recommended for handling lint or dust laden air since no outside air is circulated through motor enclosure. For corrosive applications, units can be constructed of special sheet metals. Made by **Moore Co.**, 801 S. Missouri Ave., Marceline, Mo.

For more details circle NED-5417 on enclosed inquiry slip

Just Published!
Illustrates, Explains . . .

Sier-Bath's REVOLUTIONARY NEW GEAR COUPLING

Simplified design (only 7 parts!) No flange, no bolts—assembled in seconds!

Detailed plan drawings and specs. for Standard, Mill Motor, Vertical Shaft, Spacer, Floating Shaft types.

3/5 the size, 1/2 the wt. of conventional types. Makes possible smaller, lighter designs.

How to select the right coupling clearly explained. Service factors for all types of equipment.

ALSO: Installation photos, complete list of cost-cutting advantages. Clear, graphic, concise—shows and tells how this revolutionary new gear coupling can cut *your* power transmission costs.

SEND TODAY FOR YOUR FREE COPY

Sier-Bath GEAR and PUMP CO., Inc.
Founded 1905 **9240 Hudson Blvd., North Bergen, N. J.** Members A.G.M.A.

For more details circle NED-5418 on enclosed inquiry slip

HEAT TREAT DEPARTMENTS . . .
send for new
ROLOCK BULLETIN

Fabricated-welded alloy Pit-Type Furnace Retorts, Drop-bottom Stainless Baskets, Inconel Lift Post and Nitriding Basket assemblies, Muffles, Brazing Trays, Salt Pot Baskets, etc. Save weight, time, heat, atmosphere, rejects . . . with lighter weldments for greatest resistance to exposure, shock, abrasion.

ROLOCK INC., 1412 Kings Highway, Fairfield, Conn.

JOB-ENGINEERED for better work
Easier Operation, Lower Cost

2RL50

For more details circle NED-5419 on enclosed inquiry slip

BEST BUY BROWNING

BETTER SHEAVES FOR BETTER DRIVES

BROWNING
Gripbelt Sheaves With Split Taper Bushings

Write for the name of the BROWNING distributor near you.

BROWNING MANUFACTURING COMPANY
INCORPORATED
MAYSVILLE, KENTUCKY

BEST BUY BROWNING

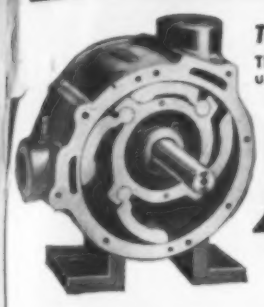
For more details circle NED-5420 on enclosed inquiry slip

SAFEWAY . . . a new and rugged light weight chain hoist

Designed to keep pace with today's demands for greater efficiency in materials handling, this new Wright hoist is light in weight, high speed, compact, strong, easy to service, long lived. Capacities from ½ to 4 tons. Load chains of steel—heat treated—proof-tested—have high wearing qualities and high safety factor against possible impact loads. Weldments of projection type. Load wheel reversible. Weston type brake resistant to high temperatures; cold, wet and dusty atmosphere. Send for bulletin DH-164.

WRIGHT HOIST DIVISION
American Chain & Cable
York, Pa.

For more details circle NED-5421 on enclosed inquiry slip



THEY TAKE UP THEIR OWN WEAR

The unique construction allows the wings to wear uniformly, regardless of age.

LEIMAN AIR PUMPS

For vacuums up to 29 in. and pressures to 25 lbs.

LET AIR DO THE JOB FOR YOU

Air can be the "invisible hand" to help you perform countless moving, holding, mixing, separating, blowing, and lifting operations. Investigate the possibility of letting vacuum or air pressure provided by a Leiman Air Pump do the job for you more easily and economically. Send us your handling problem today and let our engineers go to work on it. Over 60 years of air pump application experience may help you.

NEW CATALOG NOW AVAILABLE

Descriptive 16 page catalog, complete with engineering data, will give you the story on Leiman Air Pumps, Gas Pumps and Air Motors.

Write to Leiman Bros., Inc. 67 Christie St., Newark N. J.

MPS • AIR MOTORS • SAND BLASTS • DUST COLLECTORS

For more details circle NED-5422 on enclosed inquiry slip

Over Half of America's Top Companies Use "Speed Sweep"

THE BRUSH WITH THE STEEL BACK

BECAUSE it sweeps faster and cleaner, and outlasts ordinary brushes 3 to 1, Speed Sweep has become the No. 1 sweeping tool of American Industry — used by over 50,000 firms. Whether you use a few or a lot of brushes, you'll find it pays to switch to Speed Sweep.

Write for styles, sizes and prices.

MILWAUKEE DUSTLESS BRUSH CO.
MILWAUKEE 3, WISCONSIN

For more details circle NED-5423 on enclosed inquiry slip

K-P Spiral Woven Wire CONVEYOR BELTS

Made in suitable metals and mesh sizes for conveying, material handling, processing and heat treating. Particularly well adapted to the food industries where free circulation of air and drainage are required. K-P Flextrough Belts with flanged edges prevent small parts from rolling off the belt. Side chains provided for sprocket drive. Complete special purpose conveyors designed and manufactured.

KORB-PETTIT
Wire Fabrics & Iron Works Inc.
Engineers and Manufacturers

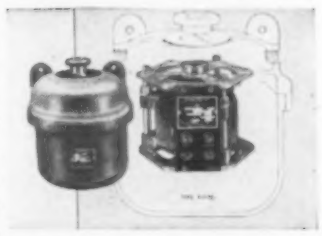
1501 N. Mascher St.
Philadelphia 22, Pa.

Wire Mesh, Spiral Woven Wire Conveyor Belts, Infra-Red Conveyor Dryers, Leather Finishing and Drying Machines, Industrial Wire Partitions, Machine and Window Guards, Cages, Enclosures, Grilles, etc.

"Keeps Promises"

For more details circle NED-5424 on enclosed inquiry slip

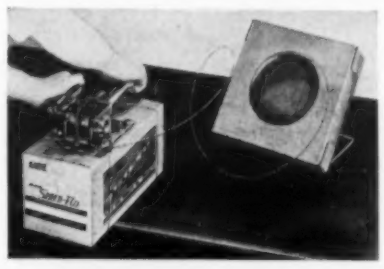
VARIABLE TRANSFORMER features explosionproof design



Continuously - adjustable source of alternating current voltage for hazardous areas is supplied by explosionproof Powerstat variable transformer. Unit is totally enclosed in case which will withstand internal gas or vapor explosions and prevent ignition by internal spark or flash of vapor or gas surrounding enclosure. Underwriters' Laboratories approved for Class 1, Group D service, transformer is supplied in 115 and 230-v ratings for single-phase operation. Made by **Superior Electric Co.,** 93 Hannon Ave., Bristol, Conn.

For more details circle NED-5425 on enclosed inquiry slip

PACKAGE TYING MACHINE uses wire supplied in 25-lb carton



Cartons, crates, bundles and packages can be securely tied with wire by means of model D wire tying machine. Tying wire is supplied in 25-lb coils packaged in dispensing type fiberboard carton. Perforated panel is removed readily and loose end of wire coil can be fed smoothly to machine without tangling. U-shaped stand supports carton. Packaged tying wire can be supplied in 17, 17½ and 18-gage sizes with coppered or galvanized finish. Made by **Inland Wire Products Co.,** Dept. NED, 3947 S. Lowe Ave., Chicago 9, Ill.

For more dtails circle NED-5426 on enclosed inquiry slip

PORTABLE INSULATION TESTER employs true cross-coil ohmmeter

Measuring 7½ x 4 x 4 in., Major megohmer has polished teakwood case, and scale is protected by metal flap. Instrument can be obtained as catalog No. 715 or 716 operating on test potential of 500 v dc and having ranges of 0 to 50 megohms, 0 to 10,000 ohms or 0 to 50 megohms, 0 to 30 ohms, respectively. Handcrank type instrument utilizes constant pressure direct current generator with slip clutch and ohmmeter movement which gives direct and accurate readings regardless of voltage variations. Features include guard circuit that prevents erroneous readings in humid atmospheres. Tester is supplied with carrying handle, leather carrying case with shoulder strap and 6-ft test leads. Made by **Herman H. Sticht Co.,** Dept. ED, 27 Park Place, New York 7, N. Y.

For more details circle NED-5427 on enclosed inquiry slip

VEMCO DRAFTING MACHINES

Designed by Engineers for Engineers

1. Convenient thumb-action indexing for every 15°.
2. Simple and positive band tightening device.
3. Flexibly articulated arms for easy head movement and flat-lying scales.

THE engineers responsible for the design of VEMCO Drafting Machines are thoroughly familiar with drafting problems. VEMCO Machines incorporate ALL the facilities desired by the engineer to fill his exacting needs. ★ The VEMCO offers smooth, effortless movement... positive setting and control for speed and accuracy. . flexibility for convenient operation... elimination of an awkward assortment of drafting tools... sturdy construction for durability. ★ VEMCO Drafting Machines are finished in blue-green metallic color for eye comfort. ★ Ask your VEMCO dealer for a demonstration or write today for illustrated catalog covering drafting machines and drawing instruments.

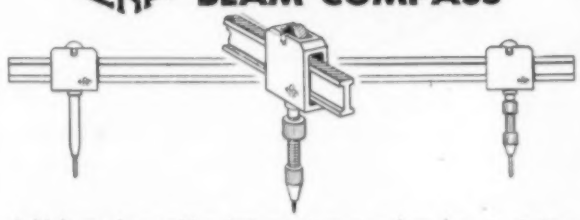
V&E MANUFACTURING CO.
PASADENA 2, CALIFORNIA

For more details circle NED-5428 on enclosed inquiry slip

ERA COMBINATION SQUARE TRAMMEL HEADS

Use on your scale or combination square to make accurate compass, height gage, inside and outside calipers and scriber. Hundreds of uses. Complete with chrome plated heads, scriber points, pencil tips, special caliper points. Used by craftsmen in every type of industry. $2.95 per set.

ERA BEAM COMPASS



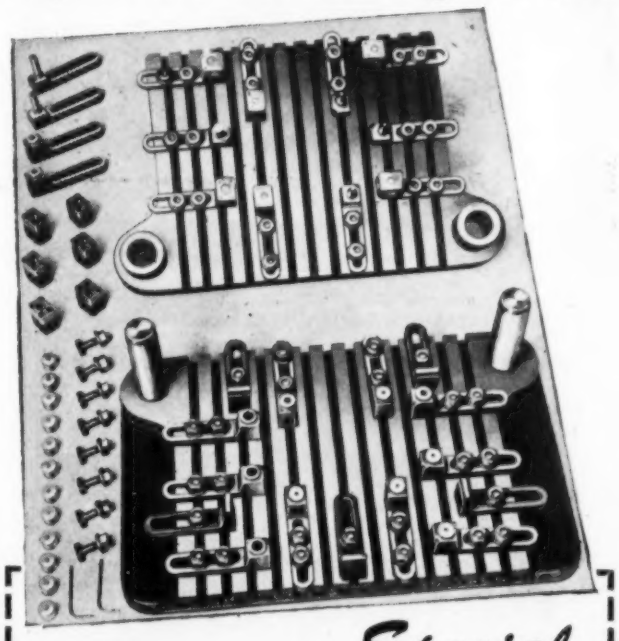
A high grade precision instrument new and modern in design. Rapid, fine adjustment by convenient thumb rollers—spring loaded friction surfaces—no screws. Lead expeller. Lies flat, prevents damage to drawings and other instruments. Made of anodized aluminum alloy, satin finish for durability and appearance. Beam lengths from 7" to 100" and pen slides nationally available. Accept no substitutes.

WRITE FOR LITERATURE TODAY!

ENGINEERING RESEARCH ASSOCIATES INC.
3475 East Nine Mile Road Hazel Park, Michigan

For more details circle NED-5429 on enclosed inquiry slip

Save TIME and MONEY with this New WHISTLER U-375 Adjustable Perforating Die Set

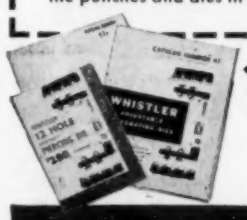


Special Introductory Offer

To prove the advantages of Whistler Adjustable Perforating Dies under your own production conditions we offer this U-375 set complete as illustrated... ready to set up and start work... at a special low price. Punches and dies are your own selection of sizes from 1/32" to 3/8". Complete set consists of 10" x 12" T slotted die set; 12 each punch, die and stripper assemblies plus locating pilots, gauges and set up plug. U-375 Unit shipped complete. . .

$280 Net F. O. B. Buffalo, N. Y.

Whistler Adjustable Perforating Dies are saving money in hundreds of metal working shops. Pierce materials up to and including 1/16" mild sheet steel. Minimum centers of 7/8". Up to 25 holes pierced in one operation with the U-375 set. Re-use the punches and dies in any number of different arrangements.



SENT FREE ON REQUEST

Special U-375 Booklet and General Catalogs. In brief informative style, with clear-cut illustrations, this literature gives complete details about Whistler Adjustable Dies. Write today.

S. B. WHISTLER & SONS, Inc.
750 Military Road Buffalo 17, New York

For more details circle NED-5430 on enclosed inquiry slip

CHROMALOX
Electric HEATERS

for heating GASES, LIQUIDS, DIES, MOLDS, PLATENS, MOVING PARTS

GET THESE OUTSTANDING ADVANTAGES:

- EASY, LOW-COST INSTALLATION—Quickly installed with minimum labor and materials; often by your own men.
- DEPENDABLE, ECONOMICAL OPERATION—Heat where it's needed—around-the-clock, day-in and day-out.
- PRECISE AND EXACT TEMPERATURE CONTROL—Measured heat up to 1000° F., rapidly reached, accurately controlled.
- MINIMUM ATTENTION—Manually or thermostatically regulated heat that needs no "stand-by" attention.

Send for CATALOG 50

It has complete data on Chromalox Electric Heaters and Equipment. No obligation.

EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

See other advertisement on page 53.

CHROMALOX IB-3

ELECTRIC HEAT FOR MODERN INDUSTRY

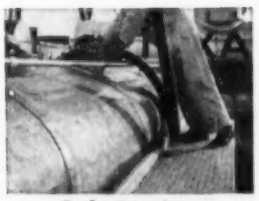
▲ For more details circle NED-5431 on enclosed inquiry slip ▲

"His Lordship refuses to walk the plank unless we put slip-resistant 4-WAY Safety Plate on it."

For greater safety under foot, in your plant and on your products

Inland 4-Way® Safety Plate

Firesafe



Safe Footing

Easy To Fabricate

Easy Assembly

INLAND

STOCKED BY LEADING STEEL WAREHOUSES

INLAND STEEL COMPANY, Dept. NED 80
38 So. Dearborn St., Chicago 3, Ill.
Sales Offices: Chicago, Davenport, Detroit, Indianapolis, Kansas City, Milwaukee, New York, St. Louis and St. Paul.

New Bulletin with New Ideas—Just Out! Bulletin F1. Complete engineering and application data. Send for it!

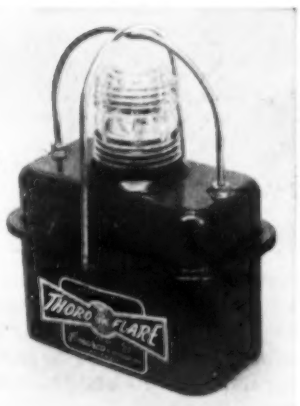
▲ For more details circle NED-5432 on enclosed inquiry slip ▲

MINIATURE STORAGE BATTERY
tiny unit delivers 1.25 v

Weighing less than 1 oz, model Al-HR-1 Silvercel storage battery is spillproof, shockproof and free of corrosive fumes or vapor. It uses silver and zinc as active materials and is of alkaline type. Overall dimensions are 1.923 x 1.085 x 0.546-in. Discharge rate of 5 amp can be maintained for 20 minutes and rates up to 30 amp are possible. Made by **Yardney Electric Corp.**, Dept. NED, 105 Chambers St., New York 7, N. Y.

▲ For more details circle NED-5433 on enclosed inquiry slip ▲

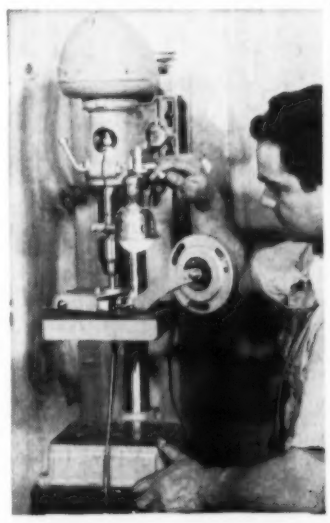
EMERGENCY SIGNAL LIGHT
electric unit is weatherproof



Flashing emergency warning signal under any weather conditions, Underwriters' approved Thoro-Flare employs battery-operated shockproof red neon tube as light source. It is also available with white, amber, blue and green lights. It has 3½-in. Fresnel lens and baked enamel finished case sealed against dust and moisture. Built-in mercury switch starts light flashing instantly when unit is placed upright. Made by **Emarco Corp.**, Box E-61, Far Hills Station, Dayton 9, O.

▲ For more details circle NED-5434 on enclosed inquiry slip ▲

SPRING WINDER
attaches to any drill press



Both tension and compression springs can be produced economically with this Spring-Master spring-making attachment which can be used on any shop drill press. It accommodates wire sizes ranging from 8 to 28 gage, and springs of any length can be made with outside diameters of 3/16 to 5/8-in. Special spindles are available for other sizes. Pitch of compression springs can by varied infinitely and spring length is limited only by length of wire. Made by **Cycloid Corp.**, 14 Newhall Ave., Saugus, Mass.

▲ For more details circle NED-5435 on enclosed inquiry slip ▲

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Production men will *profit* by the information contained in this new Logan book. It shows *dollars* and *cents* savings with Logan Conveyors in actual case histories, and sketches of typical handling solutions. Write today for your copy. There is no obligation.

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LOGAN CO., 215 CABEL ST., LOUISVILLE 6, KY.

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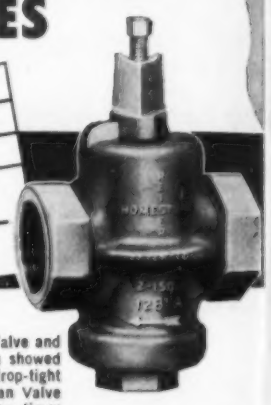
Up to 22 times more operations

WITHOUT RE-LUBRICATING

HOMESTEAD-REISER
Self-Seald LUBRICATED PLUG
VALVES



TEST RECORD	NO. OF OPERATIONS Without RE-LUBRICATING
VALVE	5
VALVE "A"	33
VALVE "B"	110
HOMESTEAD-REISER VALVE	

Each valve assembled with the manufacturer's recommended lubricant. Test made on 75 lb. air pressure.

This comparative test of a Homestead-Reiser Valve and two other well-known lubricated plug valves showed that the Homestead-Reiser Valve remained drop-tight through twenty-two times more operations than Valve "A" without re-lubricating, and through three times as many operations as Valve "B". That means that Homestead-Reisers require less attention, and give greater economy of lubricant.

Prove the superiority of Homestead-Reiser Valves to your own satisfaction, by installing a few in your plant, side by side with any other lubricated plug valve. They may be had in both semi-steel and cast-steel, sizes ½" to 12" for steam working pressures to 150 pounds, or oil-water-gas to 200 pounds.

Write for new catalog 39-5, and for prices on your requirements.

HOMESTEAD VALVE MANUFACTURING CO.
"Serving Since 1892"

P. O. Box 84 Coraopolis, Pa.

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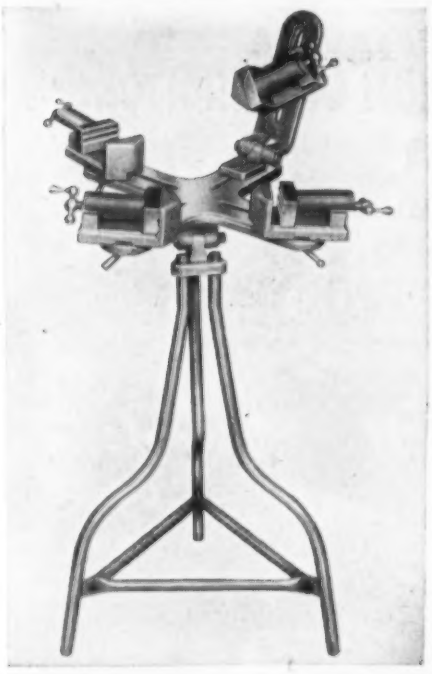

A MULTI PURPOSE WORK HOLDING and POSITIONING TOOL Made Specially for WELDING

No. 7-A Twinner Vise and Angle Plate

Fitted with four standard No. 3 size vises and 21" top plate this tool provides a holding jig and positioner for thousands of welding jobs.

Reduces set-up time, helps the welder do more accurate work. Saves the expense of special jigs.

THE EDMANDS CO. 228 Aborn St., Providence 3, R. I.

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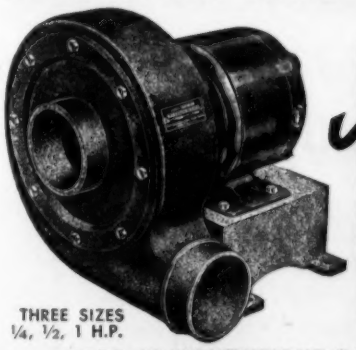

THREE SIZES ¼, ½, 1 H.P.

Sutton MOTOR DRIVEN PRESSURE BLOWERS

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY

CENTRIFUGAL TYPE designed to deliver an even, non-pulsating flow of air for blowing or exhausting. Universal as to rotation and discharge. Direction of discharge may be changed to any of eight 45 degree positions. • Housing, base, support, and impeller are constructed of cast aluminum alloy to reduce weight and increase strength. Straight wall construction reduces windage and increases efficiency. • Powered by standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor in choice of open or totally enclosed types. Three sizes: ¼, ½ and 1 H.P. with capacities from 100 to 800 cu. ft. per min. at static pressures from ½" to 6".

USED FOR removing dust from grinding, buffing and polishing equipment; for conveying cotton, wool, saw dust, shavings, etc.; for exhausting smoke fumes and vapor; to furnish blast for forges, furnaces, etc.; and for cooling and drying purposes.

WRITE FOR LITERATURE AND PRICES

Sutton Manufacturing Corp.

126 WEST WILSON AVE. NORFOLK, VA.

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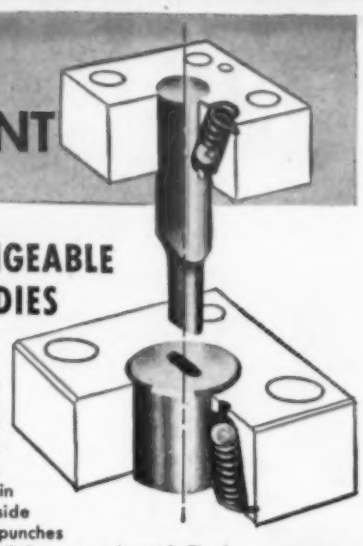

R•B* INTERCHANGEABLE PUNCHES and DIES

. . . once inserted . . . a simple matter of a push and a twist . . . stay in place, accurately positioned both vertically and radially. A ball bearing in the R•B retainer, engaging in the specially designed ball seat in the shank of the punch or outside diameter of the die, keeps the punches and dies perfectly aligned until they are released. That's why you are always assured of trouble-free punching, plus the economies of simple installation and quick changing, when you use R•B interchangeable punches and dies.

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For more details circle NED-5440 on enclosed inquiry slip

DRAFTSMEN WORK *Faster*

with Bruning Drafting Machines

Draftsmen work up to 40% faster with a Bruning Drafter because it conserves energy and increases accuracy. Combines T-square, straightedge, triangles, protractor, and scales into one precision instrument—eliminates time wasted in picking up and laying down tools. "Equipoise" models have the best gravity compensator ever devised for inclined board use. Touch Control Indexing is another exclusive Bruning feature.

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BRUNING DRAFTERS

For more details circle NED-5441 on enclosed inquiry slip

A PATCH or a FOOT a MINUTE ON CONCRETE or WOOD--

'QUICK FLOOR' DOES IT!

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FOR USE AT ONCE . . . . NO INTERFERENCE . . . . KEEP GOING! QUICK FLOOR MAKES A PERMANENT JOB, WITH THE LOWEST TRACTION. IT IS EASY AND FAST TO PLACE, WITHOUT WIRE . . . . LATH . . . . CUTTING OR MIXING . . . . JUST CLEAN . . . . PRIME . . . . PLACE . . . . AND USE . . . . THAT IS ALL . . . . REPEAT USERS ARE THE PROOF . . . . ASK US FOR NAMES.

★ For best service please write us fully describing all conditions and uses to which floor is subjected. ★

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Van Buren 6-2171

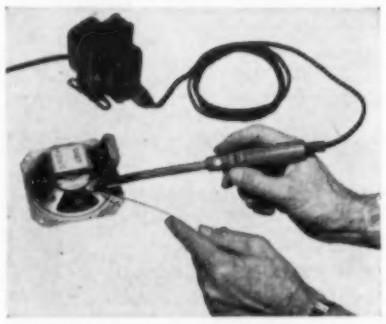
For more details circle NED-5442 on enclosed inquiry slip

TENSION LOAD BINDER in 3000 to 30,000-lb capacities

Operating handle of this Canton load binder enables one man to take up chain slack and exert up to 4500-lb tension. Continuous action adapts tool for hauling, logging, materials handling and rigging. It can be used also for opening box car doors, moving heavy objects and fence stretching. Alloy construction, drop forged hooks and 360-degree swivel action are features. Six sizes have list prices ranging from $2.30 to $13.80. Made by **Canton Cast Products,** 2407 Thirteenth St. N.E., Canton, O.

For more details circle NED-5443 on enclosed inquiry slip

ELECTRIC SOLDERING IRON powered by battery or transformer



Operating on heat induction principle, Solderweld electric soldering iron uses current only when in contact with work. Any power source capable of generating 4 to 10 v ac or dc at 5 to 10 amps can be used. Area of heat is produced between two points of split carbon electrode which is easily replaced when worn. Tool lists at $3 alone and at $7 with transformer for operation from standard alternating current. Made by **Palmer Mfg. Co.,** 57-18 37th Ave., Woodside, L. I., N. Y.

For more details circle NED-5444 on enclosed inquiry slip

PLASTIC CAP SPOUTS for oil and liquid dispensing cans

Available in black, white and colors, ¾ and 1½-in. flexible spouts for oil, lighter fluid and other small cans are made of Bakelite polyethylene. Spout can be bent to dispense fluid where needed, and will snap back to normal position. Plastic is unharmed by oil, grease and most chemicals. On package line, single stroke seals a dozen or more cans, seating the spouts both within and around can profiles. Gaskets are not required. Spouts are opened for use by puncturing or cutting off tip, and closure is effected by replacing threaded plastic cap. Distributed by **West Penn Oil Co.,** Warren, Pa.

For more details circle NED-5445 on enclosed inquiry slip

A SINGLE UNIT DOES TWO BIG JOBS!

ConoAirpak

1. REGULATES
2. FILTERS
AIR SUPPLY FOR INSTRUMENTS AND OTHER SERVICE

Here's a "small package" replacement for bulky, hard to mount airsets . . . providing precise REGULATION in ranges 0-25 or 0-60 psi, for inlet pressures up to 150 psi . . . with ability to filter out particles down to 40 microns!

Investigate ConoAirpak for all installations requiring *more* efficiency . . . *less* space, installation time, maintenance and initial cost. Forged brass and stainless steel construction for corrosion resistance—simplified mounting—large capacity reducing valve with safety relief. Available in a variety of ranges, filter areas, and drip-well capacities.

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CONOFLOW CORPORATION
2100 Arch St., Phila. 3, Pa.

Cono Controls

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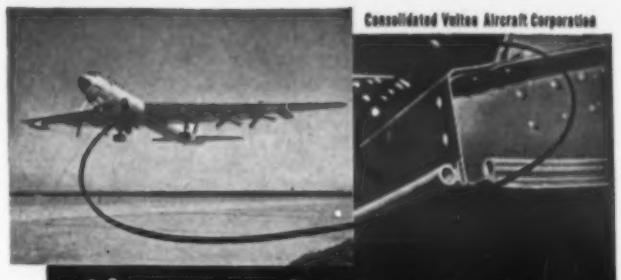

MISSION ACCOMPLISHED

Silicone Rubber Solves Seal Problem on B-36

CONVAIR design engineers needed a rubber that would take a beating at −60° F. or below and still perform its operational function. Their problem was a durable seal for the bomb bay doors of the giant B-36.

An extruded section of Silicone rubber No. 250, fabricated by STALWART, proved to be the answer. With greater abrasion resistance than any other Silicone stock, No. 250 retains its rubber-like characteristics at temperatures ranging from −110° to 400° F. This special rubber and production know-how earned another "Mission Accomplished" for The Stalwart Rubber Company.

That's why leading manufacturers Specify Stalwart for Quality Custom Rubber Parts.

THE STALWART RUBBER COMPANY
8151 NORTHFIELD ROAD
BEDFORD, OHIO

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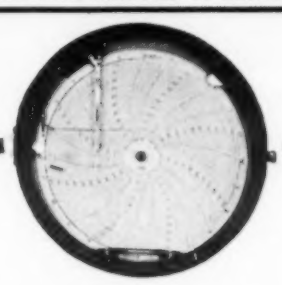

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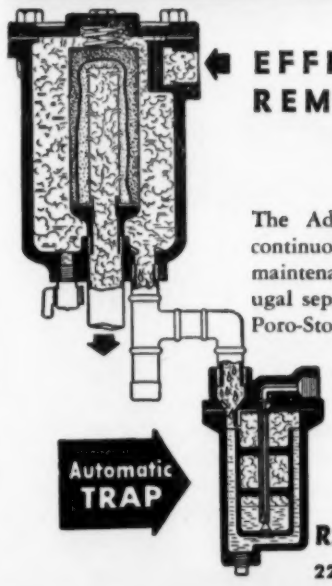
Time-proved features such as the pivoted pen arm movement, automatic chart hub, Humitex Chart . . . all help to make Foxboro Recorders the choice of leading industries throughout the world. They assure easy operation and maintenance. Dependable accuracy and long-life characterize all Foxboro Instruments.

Foxboro Recorders are available in round or rectangular cases . . . for temperature, pressure, flow, liquid level and other process variables . . . in portable, long-distance and multiple-pen types. Write for details. **The Foxboro Company, 198 Neponset Ave., Foxboro, Mass., U. S. A.**

FOXBORO Reg. U. S. Pat. Off. **RECORDERS**

For more details circle NED-5448 on enclosed inquiry slip

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES:

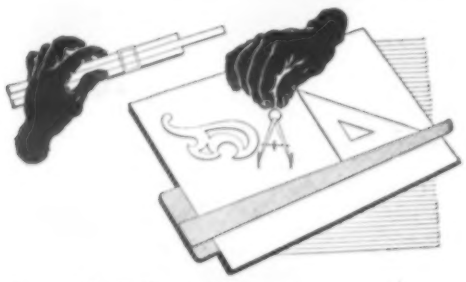
OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

For more details circle NED-5449 on enclosed inquiry slip



Design + Metallurgy = SATISFACTION

For specifying a steel machinery part, the designer and the metallurgist make a fine team.

If the part is properly designed (and this means taking the metallurgical treatment into account) the choice of a steel and its proper treatment become relatively simple.

So important are these aspects of good and poor design of parts in relation to the choice of steel and its treatment—the work of the designer and the metallurgist—that we have compiled a 70-page book on this subject, giving many sketches as examples. "THREE KEYS TO SATISFACTION" is interesting and helpful to designers and metallurgists; it is free on request.

This booklet sent to you FREE

Climax Molybdenum Company
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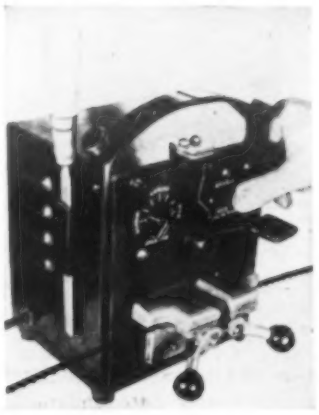
For more details circle NED-5451 on enclosed inquiry slip

PORTABLE BUTT WELDER
welds saw blades up to ½-in. wide



Weighing but 25 lb, model DBW No. 10 portable automatic butt welder permits on-the-spot welding and annealing of bandsaw blades. Welder can be plugged into any 110 or 220-v 50 or 60-cycle line. Quick accurate alignment of blade ends is made by cam-operated jaws. Carrying handle serves also as holding fixture provided with clamps so that welding flash can be removed in dressing joint with hand file. Thickness gage below fixture is used to test proper blade thickness at weld. Accessory equipment that can be obtained includes blade squaring shear and etching pencil. Made by **DoAll Co.**, 256 N. Laurel Ave., Des Plaines, Ill.

For more details circle NED-5454 on enclosed inquiry slip

SMALL CHAIN BLOCK
has lifting capacity of 1 ton

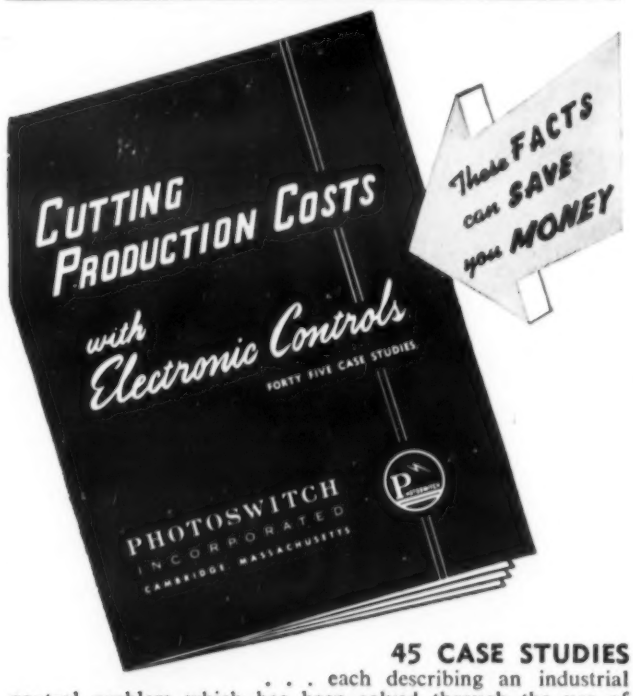
Weighing only 42 lb, Budgit 1-ton chain block is adaptable for wide range of lifting and pulling applications. Features include splined shafts; load brake which requires minimum of chain pull to keep load lowering; shock-resistant aluminum alloy frame and covers; and heat treated steel load chain, gears and shafts. Shortest distance between hooks is 15 in. Made by **Manning, Maxwell & Moore, Inc.**, Shaw-Box Crane & Hoist Div., Muskegon, Mich.

For more details circle NED-5455 on enclosed inquiry slip

TAX DEDUCTION BOOK
facilitates figuring combined taxes

By using book entitled "Delbridge Combined Social Security and Withholding Tax Chart," payroll accountant can instantly read off one federal tax deduction for employee and make one entry combining amount determined by Federal Insurance Contribution Act and withholding taxes. At end of payroll period, combined amount can be separated quickly by means of separation tables into two components before payroll journal is posted. Also at end of year, amount is separated so that each employee can receive annual statement of two withholdings. Published by **Delbridge Calculating Systems, Inc.**, 2500 Sutton Ave., St. Louis 17, Mo.

For more details circle NED-5456 on enclosed inquiry slip



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PHOTOSWITCH INCORPORATED
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faster to apply...easy to remove!

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AVERY ADHESIVE LABEL CORP.
MONROVIA, CALIFORNIA

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You're sure of faster working

EXTRA CLEAN Sockets in CLEVELAND Socket Head Screws

• It pays you to specify and buy Cleveland Socket Head Screws—made by the Kaufman Process that gives them greater strength—forms sockets perfectly concentric, true hex with sharp corners, and *clean.*

CLEVELAND *Top Quality* **FASTENERS**

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Ask your Jobber for Cleveland Fasteners

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FOR THIS HANDY
STOW FLEXIBLE SHAFTING TORQUE CALCULATOR

Gives you the information you need simply, quickly. Eliminates lengthy calculation. And, just as surely, STOW flexible shafting is the right answer for any problem of transmitting power through a curved path, around obstacles, or from one level to another.

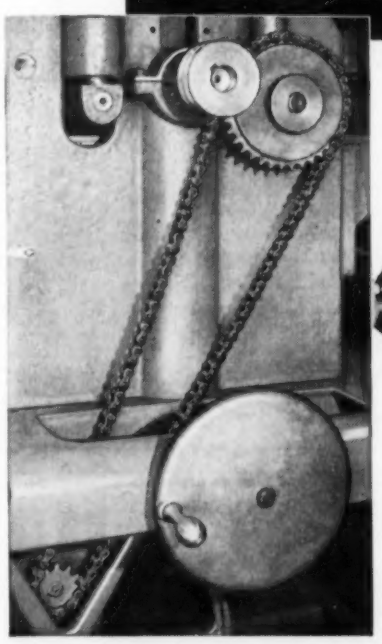
Write today, on your company letterhead, for your FREE, handy flexible shafting torque calculator. And remember STOW—first in flexible shafting since 1875.

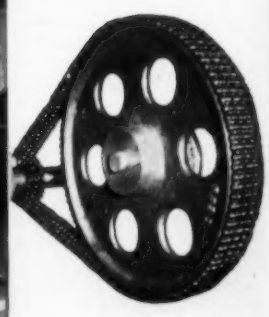
STOW MANUFACTURING CO.
26 Shear St. Binghamton, N. Y.

For more details circle NED-5458 on enclosed inquiry slip

NO SLIP!

As Positive As Gears On Short or Long Centers





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  - There is no slippage—speeds of driven shafts are held accurately.
  - Diamond Chain Drives do not depend on friction—therefore high speed ratios present no problem—and bearing pressures are low.
  - Loads are divided over many sprocket teeth.
  - Efficiency—98-99%.

For your plant and machinery drives—for conveying and materials handling equipment—high uniform quality Diamond Roller Chains give you maximum results with minimum maintenance. Write for new Catalog 709.

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Refer to the classified section of your local telephone directory under the heading CHAINS or CHAINS-ROLLER

DIAMOND ROLLER CHAINS

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No. 60 FLANGED MILLING MACHINE VISE

The Popular Vise PRODUCTION MEN Are Raving About

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Standardize your shop with this modern heavy duty milling machine vise and your production worries are over for good.

It's the ideal vise for Milling, Drilling, Grinding, Planing, Shaping, etc. Provided with bolt slots for clamping down to the table of the various machines. It is equipped with hardened and ground steel jaws, 6" wide, 2" deep, opens to full 6". You'll say it's the sweetest job you ever saw and like many leading shops now using them, you, too, will profit by lower production cost and more efficient work. **PRICE ONLY $49.50.** Order today from your dealer or

Write for Circular No. 350

CHICAGO TOOL & ENGINEERING CO.
Mfrs. of PALMGREN PRODUCTS *for over 28 years*
8378 South Chicago Avenue CHICAGO 17, ILL.

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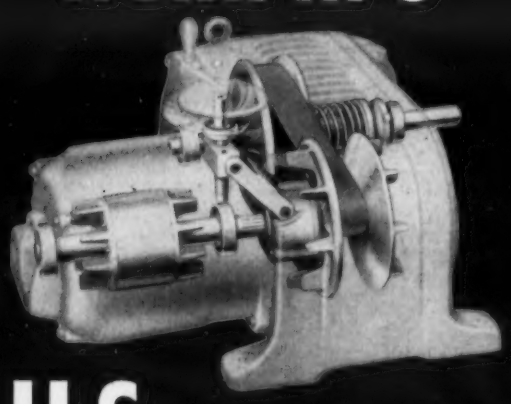

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PRECISELY THE RIGHT SPEED FOR EACH AND EVERY OPERATION INSTANTLY

Ask for Descriptive Bulletin

U.S. ELECTRICAL MOTORS, Inc.
Los Angeles 54, Calif. Milford, Conn.

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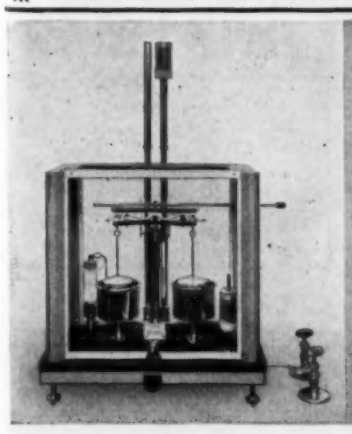

NEW ARCCO-ANUBIS *Laboratory* GAS BALANCE

SMALL SAMPLE—WIDE SPECIFIC GRAVITY RANGE

No manometer, vacuum pump, air drier or other complex accessories required

This instrument is identical in principle to the well known ARCCO-ANUBIS recording type dry air gas gravitometer. For laboratory use only, this beautiful instrument is ideal for testing samples brought in from the field. Unusually small gas sample is required.

Handles specific gravity range from .5 to 1.5 and by the use of weights a total range from .0 to 2.5.

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SEND FOR CATALOG No. 101R ARCCO-ANUBIS Gas Gravity Instruments

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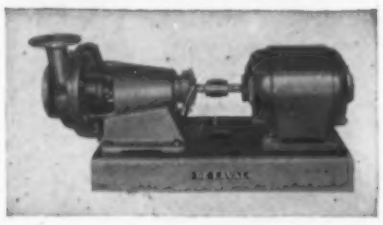
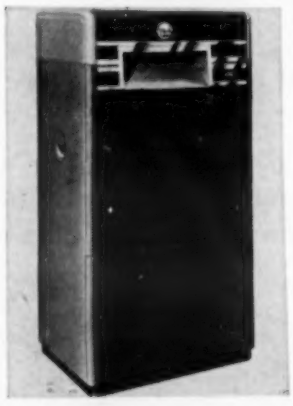
PROCESS PUMPS
seven sizes for general service use



Line of type CP pumps is designed expressly for applications in process industries that require handling hot or cold clear, viscous and corrosive liquids as well as liquids carrying suspended solids. They are furnished with open or closed impellers which are easily convertible and either mechanical seals or conventional packing. Vane characteristics and materials of construction can be selected to suit requirements. To compensate for wear at impeller face, entire rotor can be adjusted axially by means of external adjusting screw. Eductor vanes on back of impeller reduce end thrust, relieve stuffing box pressure and keep back of impeller clean when handling liquids with solids in suspension. Permanently lubricated bearings are sealed against entrance of dust and moisture. Made by **De Laval Steam Turbine Co.,** 301 Nottingham Way, Trenton 2, N. J.

▲ For more details circle NED-5463 on enclosed inquiry slip ▲

FLAKED ICE MACHINE
produces 1 ton per day of ice ribbons for chilling and cooling



Feature of model DER-11 FlakIce machine is delivery of de-aerated ice ribbons which assure retention of 'sparkle' in carbonated beverages and have clear translucent appearance. Curve-shaped ice ribbons afford excellent contact chilling for refrigerated foods, cool liquids quickly and will not bruise fruits or vegetables.

Condensing unit is mounted on spring carriage with flexible refrigerant and water connections to insure quiet operation. Freon-22 refrigerant is metered by automatic expansion valve. Sanitary ice, untouched by human hands, is frozen on polished stainless steel revolving drum. Outer shell of this drum is shrunk on spiral machined passage which forms efficient refrigerant evaporator. Fresh water is maintained at proper level in stainless steel tank by float valve. Water is pumped from tank and sprayed on revolving drum where it freezes. Stainless steel cutter blades are rotated by advancing layer of ice which is loosened by these blades and flows out of machine chute in distinctive ribbon form. Made by **York Corp.,** 111 Roosevelt Ave., York, Pa.

▲ For more details circle NED-5464 on enclosed inquiry slip ▲

DO YOU KNOW? Standard symbols for instrumentation flow plans are presented graphically in 16-page ISA Tentative Recommended Practice RP5.1. This system of symbols and identifications is compilation of best ideas and usual practice. Copies are available for $1 from the Instrument Society of America, 921 Ridge Ave., Pittsburgh 12, Pa.

▲ For more details circle NED-5465 on enclosed inquiry slip ▲

Plenty of Places...

Where this 3-in-1 Workhorse Will Save Time and Work

IMMEDIATE SHIPMENT

Table Top 26" x 43"

IT'S A WORK BENCH
A work bench on wheels, with a steel top that moves up and down—that's the Service "Liftable".

IT'S A TRUCK
Perfect for moving heavy dies, assemblies from one spot to another... saves lifting and carrying.

IT'S A LIFTER
Transfers heavy units from one table height to another merely by cranking the top up or down to any height from 28" to 42".

To move heavy pieces, dies, assemblies vertically from one level to another—and then horizontally from one place to another — use the Service LIFTABLE. Lowered, the top is 28" from floor . . . raised, it's 42". Capacity 2000 lbs. . . . chain and screw lifting mechanism...all welded construction...locks positively at any height . . . readily portable. Cut handling costs—put LIFTABLES in your plant.

Get Descriptive Circular—Write Today.

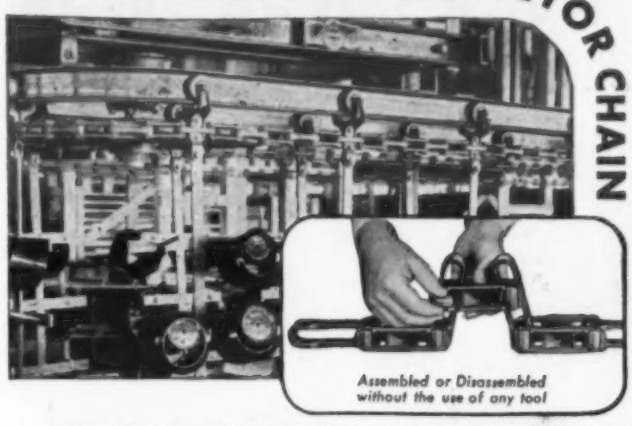
SERVICE CASTER & TRUCK CORP.

INDOOR MILES *Made EASIER and SAFER*

Executive Offices: Albion, Michigan
Plants at Albion, Michigan and Somerville 43, Mass.
See your classified Telephone Directory for name of nearest Service Distributor

▲ For more details circle NED-5466 on enclosed inquiry slip ▲

THE BEST BUY IN A CONVEYOR CHAIN



Webb Rivetless Keystone Chain is Drop Forged from high carbon steel and heat treated for extra strength.

Developed by Jervis B. Webb Co. in the early 1920's for overhead conveyor use, this type of chain is now used in 90% of all overhead conveyors.

It is strong, flexible and economical—easy to install and replace. Available in 2", 3", 4" and 6" pitch.

Write for valuable engineering catalog on Webb chain and other parts that make a complete overhead trolley conveyor.

JERVIS B. WEBB COMPANY — MANUFACTURERS OF OVERHEAD AND FLOOR TYPE CONVEYORS • • •

OFFICES IN PRINCIPAL CITIES
8921 ALPINE AVE.
DETROIT 4, MICH.

▲ For more details circle NED-5467 on enclosed inquiry slip ▲

Newark for FABRICATED WIRE CLOTH

STRAINERS
FILTERS
SCREENS

Our engineers, long experienced in the design and manufacture of precision wire cloth parts, can help solve your fabricated woven wire parts problem. We are equipped to manufacture everything from water strainers to aircraft fuel, oil and air filters. The cloth we use is Newark, long noted for its uniformity of mesh and durability of weave.

May we quote on your next requirements?

NEWARK *for* ACCURACY

8-NWC-7

Newark Wire Cloth COMPANY

351 VERONA AVENUE • NEWARK 4, N. J.

▲ For more details circle NED-5468 on enclosed inquiry slip ▲

Wear a DUPOR No. 10 Chemical Cartridge Respirator

Code "A" Cartridges (Soda Lime)—White Plastic for light concentrations of inorganic acid gases.

Code "B" Cartridges (Activated Charcoal)—Black plastic for light concentrations of organic chemical vapors.

Code "AB" Cartridges (Soda Lime and Activated Charcoal)—Yellow plastic for light concentrations of combined inorganic and organic gases.

Unit has DUPOR "controlled-breathing" valves. Double filter apertures hold 50cc. capacity chemical cartridges. Soft rubber face mask gives gas-tight fit on any shape face, as well as panorama view with no blind spots. Chemical filters are packed in colored plastic cartridges that will not corrode like metal ones or crush like paper types. Unit is shipped with code "B" cartridge unless otherwise specified.

Sample sent $4.50 pp

Extra Cartridges 70c a set

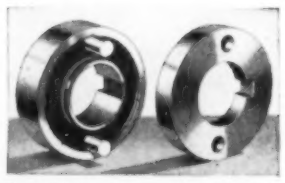
H. S. COVER, South Bend, Ind.

For more details circle NED-5469 on enclosed inquiry slip

SPEED
NO CLOGGING
REDUCED BREAKAGE
FEWER BLADES NEEDED

with Motch & Merryweather *Triple-Chip* SAW BLADES

It's fast, hazardless cutting when you use M. & M. Triple-Chip Saw Blades. Triple-Chip saws produce three curling, self-ejecting chips. This reduces the chip load per tooth and prevents clogging. You get faster feeds and speeds. Strong tooth form withstands breakage. Complete range of sizes carried in stock.



Positive, even power is transmitted to blade by pins in Dual Drive Adaptor.

Write for Bulletin 210-N.

THE MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING • CLEVELAND 13, OHIO
AT YOUR COMMAND • AN UNPARALLELED EXPERIENCE IN CIRCULAR SAWING

For more details circle NED-5470 on enclosed inquiry slip

..a new floor in 48 hours

TROWELED ON WITH *Plastic Rock*

Renew spalled concrete and old wood floors easily and quickly with this "job-tested" floor resurfacer. Perfect for general factory and institutional floors, corridors, steps, loading docks, trucking aisles, etc. Plastic Rock is unequalled in quality—unmatched in performance.

UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio

Please send me without obligation the Plastic Rock story.

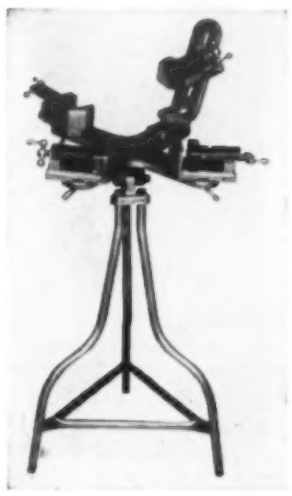
NAME.....

ADDRESS.....

CITY.....ZONE.....STATE.....

For more details circle NED-5471 on enclosed inquiry slip

WORK-POSITIONING VISE affords means for holding parts accurately for welding or assembly



Universally adjustable for angular positioning of two or more workpieces, this model 7A Twinner vise facilitates welding and assembling operations in toolroom, production or maintenance operations. Revolving 21-in. tilting top plate is equipped with four adjustable vises which have V-jaws for holding round, flat or irregular work. Iron alloy vises are adjustable to any horizontal angle and lock in any desired position along radial arms of top plate. Ball and tail handles afford fast vise action, and lead screws are covered to protect them from weld spatter. Maximum vise-jaw gap is 3 in., and jaws are 2 in. high and 3½ in. wide. Top plate is mounted on sturdy tripod base and has mechanism which permits tilting movement through 180 degrees from horizontal to vertical in both directions.

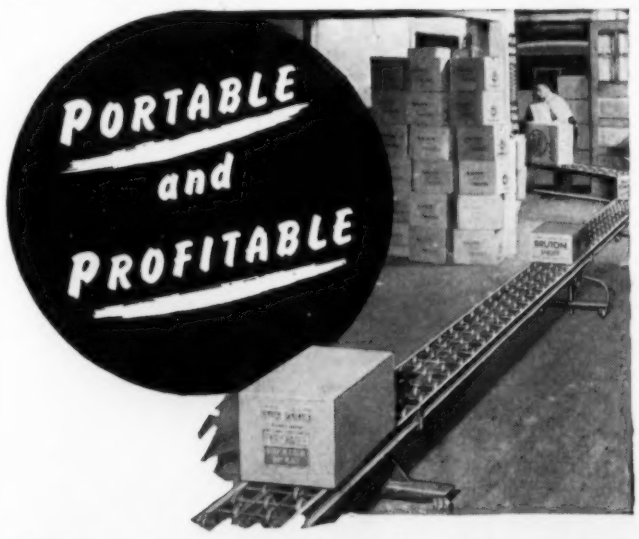
Also available is heavy duty model 37A universal welding jig which provides for three-dimensional work set up. Vises are mounted on hinged angle plates which in turn adjust on arms of revolving and tilting top plate to accommodate most complicated angular setups. Made by **Edmands Co.**, Dept. T, 228 Aborn St., Providence 3, R. I.

For more details circle NED-5472 on enclosed inquiry slip

BENDING PRESS 500-ton capacity unit accommodates gooseneck punch and standard dies

Having 3-ft extension on both ends, Steelweld model MO6-12 press will bend ⅜-in. plate in lengths up to 20½ ft. Machine has shut height of 30 in. to take special large gooseneck punch. Ram is provided with extension as shown which brings shut height down to 16 in. to permit use of standard dies when desired. Throat is 18 in. and distance between housings is 12½ ft. Machine has 6-in. stroke with speeds of 7 or 20 strokes per minute. Air-operated clutch is controlled by two foot-actuated valves. Reverse flywheel permits reversing ram at any position of stroke. Four brackets with adjustable stops mounted on slide rail can be moved up and down and along bed to gage width of metal being formed. Under full load, average deflection is less than 0.001-in. per foot between housings. Made by **Cleveland Crane & Engineering Co.**, 6607 E. 282nd St., Wickliffe, O.

For more details circle NED-5473 on enclosed inquiry slip



● Convert the cost of excessive handling of your products into profits by installing easy-to-set-up, low cost, portable BUSCHMAN "Roll-or-wheel" conveyors.

Available in 5 ft. and 10 ft. straight and curved sections, with stands, 3-way switches and other accessories . . . moved and reset in just a few moments without a tool. Write for bulletin today.

Buschman *Conveyors*

THE E. W. BUSCHMAN CO., INC.
Spring Grove at Winton Pl. Cincinnati 32, Ohio

For more details circle NED-5474 on enclosed inquiry slip

FOR GREATER OPERATING ECONOMY...

SEALMASTER Self-Aligning BALL BEARING UNITS

SEALMASTERS alone have this exclusive combination of Features

Pillow Blocks
Take-Up Units
Flange Units
Cartridge Units
Flange Cartridge Units

- **Positive, Permanent Seal**—Patented centrifugal seal retains lubricant and keeps out dirt.
- **Self-Aligning**—SealMasters simplify mounting. Shaft misalignment cannot distort seal.
- **Pre-Lubricated**—SealMaster bearings are shipped with lubricant sealed in, ready for immediate service.
- **Patented Locking Pin**—Prevents rotation of outer race in housing . . . permits several degrees of shaft misalignment and positions unit for relubrication.

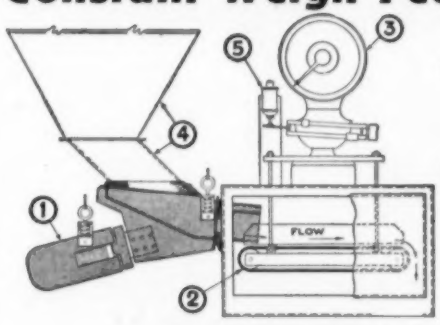
Write for SealMaster Catalog 845

STEPHEN S-ADAMSON Mfg. Co.
12 Ridgeway Ave., Aurora, Illinois Los Angeles, Calif. • Belleville, Ont.

Factory Representatives and Dealers in All Principal Cities

For more details circle NED-5475 on enclosed inquiry slip

For Really Accurate Constant Weigh Feeding!



1—Vibratory Feeder.
2—Scale-suspended, constant-speed belt conveyor.
3—Weighing Scale.
4—Supply Hopper and Chute.
5—Automatic Electric Control of Feeder's Flow.

The Always Dependable

SYNTRON

GRAVIMETRIC FEEDERS

—with their purely "ELECTRONIC" instantaneous correction of even the slightest variation in weight in the flow of bulk material, offer accuracies far beyond those possible with mechanically controlled equipment.

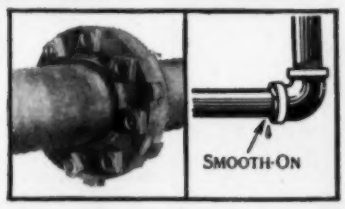
Small sizes for weigh feeding chemical reagents—up to huge models for hundreds of tons per hour of ore, coal, limestone, etc.

Write for new brochure on Weigh Feeding "Electronically"

SYNTRON CO.
405 Lexington Homer City, Pa.

For more details circle NED-5476 on enclosed inquiry slip

HOW TO PREVENT LEAKS at Flanged or Threaded Joints



Comes ready to use in 1-, 5-, and 20-lb. sizes. If your supply house hasn't Smooth-On No. 3, write us.

You can effectively and lastingly seal flanged and threaded joints, rivets and seams by applying Smooth-On No. 3. This soft metal cement flows into and fills all voids when making up a joint, besides serving to lubricate threads. It expands and contracts like the surrounding metal with changes in temperature so that it keeps the joint tight. It is impervious to steam, water, oil, gas, air and many chemicals, and withstands high pressures as well as high temperatures. And it makes a tight joint that is ready for immediate service, and may be taken apart when desired.

FREE Repair Handbook

40 Pages of practical repairs to plant equipment, piping and structures, illustrated with 170 diagrams. Write for your free copy today.

SMOOTH-ON MFG. CO., Dept. 10
570 Communipaw Ave., Jersey City 4, N. J.

Do it with SMOOTH-ON

For more details circle NED-5477 on enclosed inquiry slip

with an **S-A BOX CAR LOADER**

Load and trim box cars at a fraction of the cost of manual trimming . . . Save time and money!

One man, with part time attention to the S-A Loader, can handle up to 100 tons an hour—of any loose granular or small lump material up to 2" lump size.

Exposure of operator to dust is reduced to a minimum. Centrifugal action whirls material in a directed stream to any spot in the car.

Write for Bulletin No. 240 with complete details.

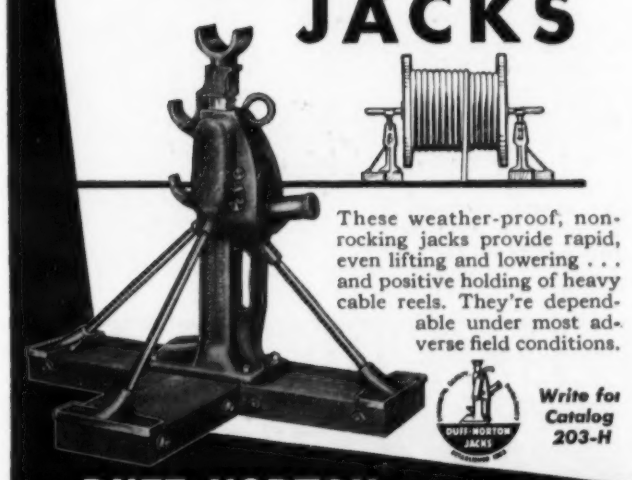
STEPHEN S-ADAMSON MFG. CO.

TELLEVEL—Bin Level Controls · Car Loaders · Variable Speed Reducers · Car Pullers · SealMaster Ball Bearings · Winches · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILL.

For more details circle NED-5478 on enclosed inquiry slip

Keep heavy reels from tipping or wobbling with **DUFF-NORTON CABLE REEL JACKS**



These weather-proof, non-rocking jacks provide rapid, even lifting and lowering . . . and positive holding of heavy cable reels. They're dependable under most adverse field conditions.

Write for Catalog 203-H

THE **DUFF-NORTON** MANUFACTURING CO.

Main Plant and General Offices: PITTSBURGH 30, PA. Canadian Plant: TORONTO 6, ONT.

"The House that Jacks Built"

For more details circle NED-5479 on enclosed inquiry slip

WELL CAST

Aluminum Electric Motor Housing

You're sure of a strike like this, when you've made sure your tackle and technique are RIGHT.

And you can't miss if you apply the same principle in buying aluminum and magnesium castings.

Particularly when you specify *Well-Cast* castings. You know you are getting 40 years' experience; three *complete* plants; X-Ray facilities; close metallurgical control; quality production technique.

Sand, semi-permanent, permanent mold.

Like to receive the Wellman Magazine each month?

Drop us a note.

"A Light Casting Is the Right Casting"

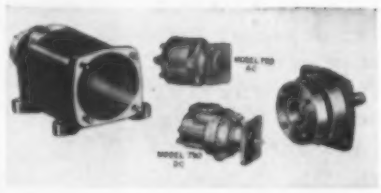
Well-Made wood and metal patterns
Well-Cast Ampco bronze castings

THE **WELLMAN** BRONZE & ALUMINUM COMPANY

2516 EAST 93rd STREET ★ CLEVELAND 4, OHIO

For more details circle NED-5480 on enclosed inquiry slip

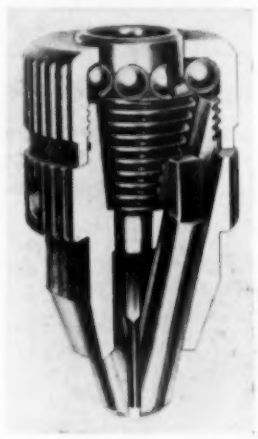
TACHOMETER GENERATOR for use in explosive atmospheres



Underwriters' Laboratories listed for use in class I group D and class II groups F and G hazardous locations, type E tachometer generator is available as model 358 alternating current rotating magnet type which is suitable for speeds up to 5000 rpm. Higher speeds can be accommodated on special order. Generator can be operated in either direction, but indicator reads only in one direction. Model 750 wound-armature direct current generator can be operated at speeds up to 2000 rpm, and associated indicator can be adjusted to read in either direction. Made by **Weston Electrical Instrument Corp.**, 663 Frelinghuysen Ave., Newark 5, N. J.

For more details circle NED-5481 on enclosed inquiry slip

KEYLESS DRILL CHUCK available in 1/2 to 5/8-in. sizes



Usable on any spindle type tool, keyless drill chuck consists of cone-shaped screw directly actuating three gripping jaws and is self-tightening. Large ball bearing thrust with self-centering action assures accuracy and gripping power under heavy loads yet permits grip to be released easily. Stocked to fit any tapered or threaded spindle used on standard machine tools, chucks are available with capacities of 1/4, 3/8, 1/2 and 5/8-in. Made by **Ettco Tool Co.**, 573 Johnson Ave., Brooklyn 6, N. Y.

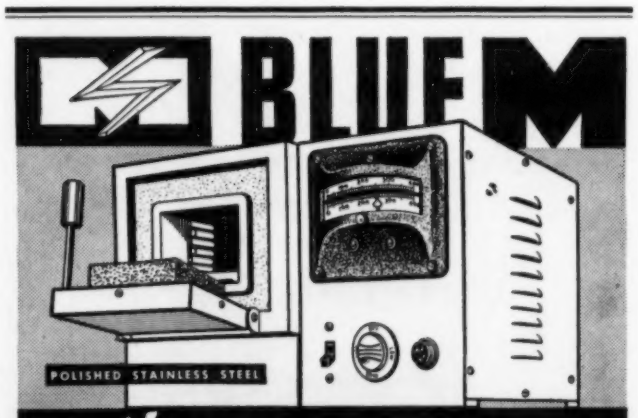
For more details circle NED-5482 on enclosed inquiry slip

ABRASIVE DISKS & HOLDERS grind and polish contoured surfaces

Recommended for use with all types of portable grinders, these Pres-On abrasive disks have adhesive-coated side which permits them to be attached quickly to holder. Disk holders are tough flexible rubber that contain standard threaded inserts molded into base for acceptance of standard mandrels of any desired length. Flexible abrasive surface permits grinding and polishing contoured work as well as deep or shallow cavities. Illustrated trial kit contains three flexible disk holders having 3/4, 1, and 1 1/2-in. diameters and three sets of 50 abrasive disks to fit holders. It is priced at $9.75. Disks can be obtained in 60, 80, 100, 120, 150, 180, 240 and 320-grit size and in diameters from 1/2 to 3 in. Made by **Metal Removal Co.**, 1012 N. Ashland Ave., Chicago 22, Ill.

For more details circle NED-5483 on enclosed inquiry slip

BLUE M



NEW! ELECTRIC FURNACE WITH ELECTRONIC PYROMETRIC CONTROLLER & MODELLA ELEMENTS

★ HEAT TREATING OF FERROUS AND NON-FERROUS METALS, GLASS ANNEALING, ETC.

AUTOMATIC—ACCURATE

- Thermocouple break protection and a 3 way (low, medium, high) switch at no extra cost.
- No need to check and double check temperatures. Set it once and forget it . . . fully automatic in operation.

Popular size model M-25A, 5 1/4" W. x 4 1/2" H. x 10" Deep, 18 Amperes, 115 Volts A.C., up to 2000° F temp. range. All wiring complete. **$335.00**

★ Other sizes both larger and smaller are available.

BLUE M ELECTRIC COMPANY
306-308 WEST 69TH STREET
CHICAGO 21T RAdcliffe 3-4180

For more details circle NED-5484 on enclosed inquiry slip

For a better drive, select the proper Cleveland unit

WRITE for copies of the latest Cleveland catalogs for full information on all types and sizes of worm gear speed reducers—including rating tables, dimensional diagrams and data for both standard and fan-cooled units. Ask for Catalog 200 for standard drives and Catalog 300 for Speed-aire (fan-cooled). The Cleveland Worm & Gear Co., 3283 East 80th St., Cleveland 4, O.

CLEVELAND Worm Gear Speed Reducers

For more details circle NED-5485 on enclosed inquiry slip

LETS HAVE THE TOUGHEST CHAIN JOB IN YOUR PLANT

● Put HERC-ALLOY Steel Chain on the toughest job you can find. Let HERC-ALLOY service-experience records give you first hand, the undeniable answers in black and white.

Production executives and safety directors who have used HERC-ALLOY for slings or other applications agree they have yet to find an alloy steel chain superior to HERC-ALLOY.

COLUMBUS McKINNON CHAIN CORPORATION

(Affiliated with Chisholm-Moore Hoist Corporation)

GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.

SALES OFFICES: NEW YORK • CHICAGO • CLEVELAND • SAN FRANCISCO

Other Factories at Angola, New York, St. Catharines, Ontario and Johannesburg, S. A.

For more details circle NED 5486 on enclosed inquiry slip

GLOBE PRODUCTION LIFT

Speeds-up Machine Feeding

Raises materials automatically to machine bed level for faster hand feeding. Saves waste motion of stooping, lifting, reaching. Cuts feeding time 25% to 100%. Push button or foot control. Low-cost installation anywhere in plant, for any type of machine feeding job.

Write Today for Illustrated Bulletin N850

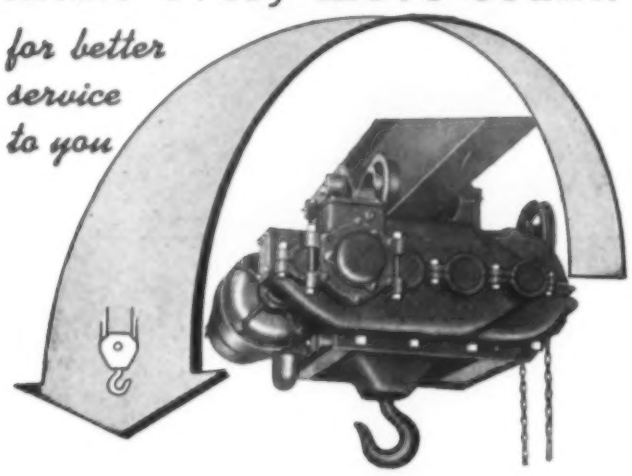
GLOBE HOIST COMPANY

Philadelphia 18, Pa. Des Moines 6, Iowa

For more details circle NED-5487 on enclosed inquiry slip

make every move count!

for better service to you



NORTHERN HI-LIFT ELECTRIC HEAVY DUTY HOISTS

Quick, dependable movement of materiel is a "must" for cost control. NORTHERN HEAVY DUTY HOISTS represent over fifty years' knowledge in building overhead handling equipment which makes every move count in better service to you and your customers.

Write for Bulletin No. H-111.

NORTHERN ENGINEERING WORKS, 2615 Atwater St., Detroit 7, Mich.

NORTHERN CRANES AND HOISTS

For more details circle NED-5489 on enclosed inquiry slip

are you "up-to-date" on SPRAY NOZZLE developments . . . for example

✓ Spraying Systems Pneumatic Atomizing Nozzle with Cleanout Needle . . . spring loaded cleanout needle is open in normal position. When pushed into orifice, cleans out entire orifice passage. Write for Data Sheet 4198.

✓ Spraying Systems Pneumatic Atomizing Nozzle for Automatic Operation . . . provides intermittent operation. Typical use is automatic lubrication of molds . . . with lubricating operation indexed to press cycle. Write for Data Sheet 4547.

✓ Spraying Systems Pneumatic Atomizing Nozzle with Steam Jacket . . . for spraying liquids requiring above-room temperature. The nozzle is easily removed from the jacket. Write for Data Sheet 4610.

WRITE and tell us the details of what you want to accomplish in spraying . . . our engineering facilities are at your service. Also . . . do you have General Catalog No. 22?

SPRAYING SYSTEMS CO. 3211 RANDOLPH STREET BELLWOOD, ILLINOIS (Suburb of Chicago)

For more details circle NED-5490 on enclosed inquiry slip

SEND FOR YOURS TODAY!

HARPER COMPUTER of corrosion resistance

Gives you a quick, easy method of determining what metal alloys to use in connection with 143 different corrosive agents. Ideal for metallurgists, product designers, engineers, chemists, purchasing agents. Sized to fit your pocket. Developed by The H. M. Harper Co., America's leading specialist in non-ferrous and stainless steel fastenings.

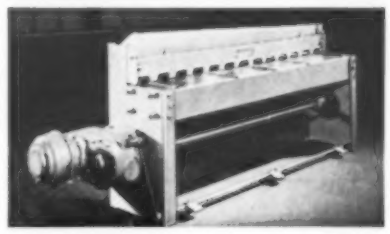
FREE

MAIL COUPON TODAY

The H. M. Harper Company
8212 Lehigh Avenue, Morton Grove, Ill.
Please rush my free copy of the Harper Computer of Corrosion Resistance.
Name.....
Company.....
Address.....
City..... State.....

For more details circle NED-5491 on enclosed inquiry slip

POWER SQUARING SHEAR employs multiple-edge knife

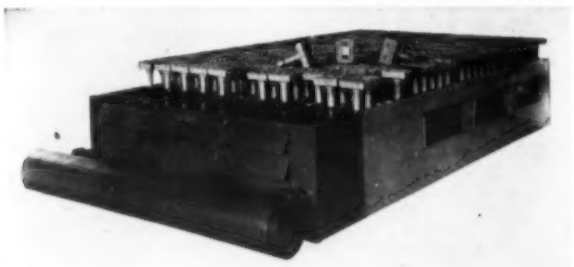


Down time for knife regrinding is minimized in this series 1 power squaring shear. Knife has four cutting edges so that by rotating knife to new cutting edge four times as much service is obtained. Shear is capable of cutting 6-ft lengths of 14-gage sheet metal at 85 cuts per minute. Cutting lengths of 3, 4 and 5 ft can be obtained also. Gaging is obtained by front, side squaring and precision ball bearing self-measuring back gages. Latter can be indexed on intervals of 1/128-in. Electric foot switch can be furnished for remote control of shear which permits operator to handle long or wide sheets of metal. Drive features completely enclosed transmission in which all mechanisms including clutch, gearing, flywheel and detent operate in oil. Made by **Niagara Machine & Tool Works,** Northland Ave. & Chelsea St., Buffalo 11, N. Y.

For more details circle NED-5492 on enclosed inquiry slip

GAS BURNER operates with extremely low draft

Automatic firing of all sizes of industrial and commercial furnaces and boilers with gas is afforded by GCV series gas burner. It is available in sizes and capacities



ranging from 450,000 to 11,520,000 Btu and more input. Burner assembly is made up of manifold, piping, draft box and draft doors. Draft controls are not essential because of large percentage of primary air entrained through proportional mixing Venturi tube. Various sections of burner heads can be controlled by independent manual or automatic valves, and various groups of burner heads can be operated in proportion to heat requirements. Burner is noiseless and will not vibrate under any range of draft conditions. Made by **Iron Fireman Mfg. Co.,** Dept. G., 2838 S. E. Ninth Ave., Portland, Oreg.

For more details circle NED-5493 on enclosed inquiry slip

DO YOU KNOW? Opening and closing like a pair of scissors, V-mop allows user to sweep path any desired width from 6 to 37-in. As mop is pushed across floor, dirt and litter is held in V-shaped pocket formed by the two hinged mop heads. Two handles quickly change width of mop. Lightweight tubular steel handles, rubber grips, balanced design and refillable mop channels are features. Made by G. H. Tennant Co., 2586 N. Second St., Minneapolis 11, Minn.

For more details circle NED-5494 on enclosed inquiry slip

STRONG!

XXX lbs.

McGILL LAMP GUARDS

5000-SLR. Plastic handle with convenience outlet and switch — concentrating lens and reflector.

Construction extras make a Longer Lasting Guard

McGill lamp guards have the built-in extra strength to protect bulbs and sockets through rough usage, far better than ordinary guards. Extra heavy steel wires, zinc plated . . . solid welds binding the wires together . . . substantial wooden, rubber or plastic handles . . . cord strain reliefs — these are visible evidence of better quality.

These advantages are yours in all portable and McGill models including standard, vaporproof, moisture-proof and fully insulated types. All approved by Underwriters' Laboratories. For the best in lamp protection . . . buy McGill.

Available Through Your Electrical Wholesaler

For new Catalog No. 49 write: McGill Mfg. Co., Inc., 151 N. Campbell Street, Valparaiso, Indiana.

McGILL® electrical specialties

ONLY McGILL MAKES *Levelier* SWITCHES

For more details circle NED-5495 on enclosed inquiry slip

Bulletin 700 A-C Solenoid Relays

A-B Quality

- Silver-alloy contacts need no maintenance
- "N. O. or N. C." universal contactor

Bulletin 700 A-C Solenoid Relays offer a versatile line of small solenoid-operated switches for applications requiring compact contactors of unfailing dependability. Available in single- and multiple-pole constructions up to and including a twelve-pole unit. Universal types can be changed from normally open to normally closed by merely changing connections. Write for complete information. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY QUALITY MOTOR CONTROL

For more details circle NED-5496 on enclosed inquiry slip

Good Packaging Requires Sound Checkweighing . . . .

Uniform bags or cartons meet every requirement. Net weight in the container is accurate . . . overweight is eliminated and product recovered . . . underweight does not occur. You meet all weights and measures regulations everywhere. No matter what or how you package gear your checkweighing to your production line. Do this with weighing equipment that fits your job. EXACT WEIGHT Scales are in daily use in thousands of manufacturing plants, coast to coast . . . are built for your particular needs for manually operated, semi-automatic or fully automatic operations. Write for details for your business.

EXACT WEIGHT SCALES

Industrial Precision

THE EXACT WEIGHT SCALE COMPANY
129 W. Fifth Avenue, Columbus 8, Ohio
2920 Bloor St., W., Toronto 18, Canada

For more details circle NED-5497 on enclosed inquiry slip

Now every shop can have the advantages of BAND SAWING

The New WELLS *Model 49 A* **METAL CUTTING BAND SAW**

The new Wells Model 49A fits the smallest shop's budget, yet it does a man-sized job in any plant. From its welded steel frame to its tubular steel base, the Wells Model 49A is a rugged shop tool that will give long, dependable service. Its portability is unequalled. Capacity: Rectangular—3½" x 6⅝", Rounds—3½" diameter. Easy to operate without special training, the Model 49A can be used by anyone in the shop. Automatic shut-off at the end of the cut eliminates the need for the operator to stand by. Write for complete details.

Wells Saws — Wells

Products by Wells are Practical

METAL CUTTING BAND SAWS

WELLS MANUFACTURING CORPORATION
1313 HARDING ST., THREE RIVERS, MICHIGAN

For more details circle NED-5498 on enclosed inquiry slip

NOW...even greater PROTECTION!

BS&B Combination Pressure-Vacuum VENT VALVE *plus* FLAME ARRESTOR

Prevent flame propagation into your atmospheric storage tanks. Now the famous BS&B VVH Pressure-Vacuum Vent Valve has been combined with an arrestor bank. Its network of capillary openings offer efficient heat radiation . . . prevent touching off vapors and fluids. Functions efficiently at highest temperatures. Vent valve protects against both overpressures and vacuum.

Will Not Freeze Shut!

Rubber to metal seating. Easily cleaned. Tight. Consult your insurance man about credit toward lower premiums. Write for literature.

BLACK, SIVALLS & BRYSON, Inc.
Section 1-85-BFA
720 Delaware Kansas City 6, Mo.

VVH Pressure-Vacuum Vent Valve-Flame Arrester

Size Inches	Opening Pressures, Ozs. Minimum	Opening Pressures, Ozs. Maximum	Vacuum Openings* Ozs.
2	0.5	1.75	0.5
3	0.5	1.75	0.5
4	0.5	1.75	0.5
6	0.5	1.75	0.5

NOTE: Pressures in these tables are for cast aluminum cover only. Pressure ratings require a manufacturing tolerance of plus or minus 5 per cent.

For more details circle NED 5499 on enclosed inquiry slip

HERE'S HOW TO REDUCE YOUR TOP-HEAVY V-BELT INVENTORY

• Four reels of Veelos, the adjustable v-belt, can *replace* up to 316 sizes of endless v-belts—in the O, A, B and C widths. You may not use all these widths. If not, one or two reels of Veelos may be enough.

Veelos is easy to install without dismantling outboard bearings. It runs true—delivers steady, full, vibrationless power. It cuts down on machine maintenance because uniform tension can be maintained on all belts.

VEELOS THE LINK V-BELT

Adjustable to any length
Adaptable to any drive

WRITE FOR YOUR COPY of the Veelos Data Book. It gives complete engineering, measuring and installation information on Veelos v-belts.

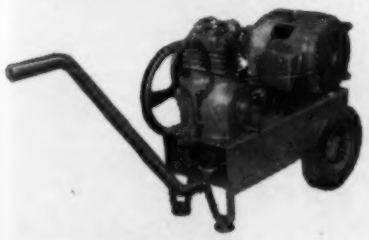
MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

For more details circle NED-5500 on enclosed inquiry slip

COMPRESSED AIR on the spot

PORTABLE QUINCY COMPRESSORS FROM 1 TO 90 C.F.M.

Provide mobile supply of compressed air at any point in the plant with an economical Quincy Portable Compressor. Select from the Quincy line of portables . . . four types of mountings, gasoline engine or electric motor drive . . . sizes from 1 to 90 c.f.m. Get details. Write for FREE literature and latest prices.



Quincy COMPRESSORS

QUINCY COMPRESSOR CO., Dept. NE-80, QUINCY, ILLINOIS

For more details circle NED-5501 on enclosed inquiry slip

HYDRAULIC INDEXING TABLE
available in 6 and 12-station types

Usable on either 35-ton Multipress or other similar types of equipment, this 33-in. automatic hydraulic indexing table has 24-in. work circle and provides variable speeds for any preselected indexing rate from 10 to 70 per minute. When installed on Multipress, it is powered by pumping unit of press, but it can be operated also by small auxiliary pumping unit when used with other than hydraulic equipment. It operates in positive sequence and is controlled by action of press ram. Positive interlock prevents ram from descending while table is in motion. Features include locking device that holds dial firmly in place at each station. Built-in skip-station accessory can be obtained to permit hurdling from one to five stations without loss of time. Made by **Denison Engineering Co.,** 1152 Dublin Rd., Columbus 16, O.

For more details circle NED-5502 on enclosed inquiry slip

LABORATORY TUBE TESTER
scale reads directly in micromhos

Built to test accurately subminiature tubes, model 539 laboratory type instrument has separate meter to permit close adjustment of line voltage while tube is under test. Provision is made for inserting plate milliammeter to read plate current. Incorporating two transformers to test future life of tube accurately, unit has signal voltages of 0.25, 0.5 and 2.5-v ac in addition to direct current grid bias and plate and screen voltages. Provision can be made for self-bias and for vernier adjustment of bias. Unit is built into portable leatherette-covered carrying case. Made by **Hickok Electrical Instrument Co.,** 10547 Dupont Ave., Cleveland 8, O.

For more details circle NED-5503 on enclosed inquiry slip

DO YOU KNOW? Insect repellent R-40 type Pyrex-reflector spot and flood lamps for outdoor lighting of all types are now available. Color is integral part of glass and is unaffected by weather. Lamps are available in 150 to 500-w sizes in medium base and in 300 and 500-w types in Mogul bases. Made by Verd-A-Ray Corp., Toledo 5, O.

For more details circle NED-5504 on enclosed inquiry slip

SAVED

the MIKRO band of ECONOMY

93% IN POWER
84% IN TIME
with the
MIKRO-PULVERIZER

Two pass Wet Milling MIKRO-PULVERIZER installation.

Leading manufacturers of pencils and crayons have applied the Wet Milling MIKRO-PULVERIZER to grinding their clay-graphite and color sludges.

In one plant former procedure had been to run 150-gal. in ball mills requiring total of 25 hp for a period of more than 50 hrs. Same finished product produced in Wet Milling MIKRO-PULVERIZER in 8 hours using 10 hp-1250 hp hrs. compared to 80 hp hrs.

The Wet Milling MIKRO-PULVERIZER has found considerable use in food products, color and dyestuff, pharmaceutical, chemical, clay, cosmetic and insecticide industries. It is equally successful on both pastes and slurries.

Also available for Dry Milling, our full line of MIKRO-PULVERIZERS and ATOMIZERS. For complete recovery of solids and elimination of industrial dusts, investigate our MIKRO-COLLECTOR.

SEND FOR—New Illustrated MIKRO Catalog

PULVERIZING MACHINERY COMPANY
288 Chatham Road Summit, New Jersey

PRESERVE OUR HERITAGE: FAITH, FREEDOM and INCENTIVE

MIKRO-PULVERIZER -ATOMIZER
Also Makers of the MIKRO-COLLECTOR

For more details circle NED-5505 on enclosed inquiry slip

Remove SCALE, PAINT, RUST Quickly . . . Easily

USE AURAND CLEANING TOOLS

For any hard metal or stone surface—iron—steel—brick—concrete—etc.

Electric and Pneumatic 2 sizes of each

It's easy to remove paint, scale, rust and other accumulations with AURAND Cleaning Tools. Powered rotary chipping does a thorough cleaning job in less time. No special skill required. Even depth surface is assured by an adjustable shoe control. Cutter heads are renewable.

For further information, address Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle NED-5506 on enclosed inquiry slip

Competition Cannot Equal the MOTO-TRUC

the SHORTEST MOTORIZED, BATTERY OPERATED WALKIE TYPE PALLET TRUCK built!

OPERATES IN NARROWER AISLES

And this pallet truck has many other exclusive advantages.

EASIEST TO OPERATE— All controls are in easy grip roller type handle.

LESS WORKING PARTS AND EASIER ACCESSIBILITY— A time saver in inspecting and servicing.

POWERFUL AND RUGGED TYPE MOTORS— 12-volt for ordinary operation, 18-volt for heavy duty or ramp operation.

SAFETY IN OPERATION— The only walkie type truck using an internal expansion type brake mounted on the drive wheel and controlled directly from the steering handle. If any parts should break between the motor and brake, the operator has absolute control of the truck.

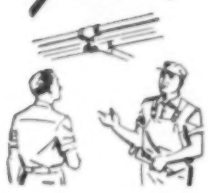
WRITE FOR BULLETIN NO. 50, showing the extensive line of Moto-Trucs.

The MOTO-TRUC Co.
1953 E. 59th Street
CLEVELAND 3, OHIO.
ORIGINATORS OF MOTORIZED HAND TRUCKS

For more details circle NED-5507 on enclosed inquiry slip

O-B No. 11 Outside Screw Bonnet Valve. Available in globe or angle from 1/8-inch to 3-inch sizes and suitable for general industrial use on air, oil, gas, water, or steam. Furnished with 150-lb. W.S.P. steam discs for temperatures up to 350° F. Other type discs available on request.

REPLACING WORN VALVES *again?*



You can end the valve replacement problem in your plant at no extra cost. Extra heavy, solid cast O-B valves provide the sturdiness you need for safety on higher industrial pressures and steam service. All parts are cast of high grade bronze and accurately machined to assure you leaktight joints and trouble-free operation.

Disc change is simple, for the outside screw-over bonnet design permits easy take-down.

See your local O-B distributor whenever you need a better industrial valve.

OHIO BRASS COMPANY MANSFIELD 8, OHIO

Ohio Brass VALVES

For more details circle NED-5508 on enclosed inquiry slip

PAGE FENCE - Since 1883

• AMERICA'S FIRST WIRE FENCE •

Tailored to Your Needs

● Whether you have management or operating responsibility we have a new, informative booklet that's tailored for you. It will give you valuable information on day and night protection of property and persons by means of fence that's also tailored to your requirements. Your Page Chain Link Fence can be of the style, height and metal that's best for you, no matter what the conditions. And it will be erected by experienced, local experts who offer more than a product—a complete fence service. Write for DH-142. With it we will send name and address of nearest Page Fence specialist.

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, Pittsburgh, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

For more details circle NED-5509 on enclosed inquiry slip

REDUCE YOUR FASTENING COSTS with SEMS by SHAKEPROOF

WRITE FOR *Free* TEST KIT

To make every screw fastening operation faster, easier and more dependable specify SEMS-by-SHAKEPROOF. Specially designed Shakeproof Lock Washers are *pre-assembled* to machine screws to provide easy-to-handle units. You obtain greater locking power, greater tooth engagement and eliminate the possibility of washer canting as *extra* advantages.

ask for Kit No. 23 →

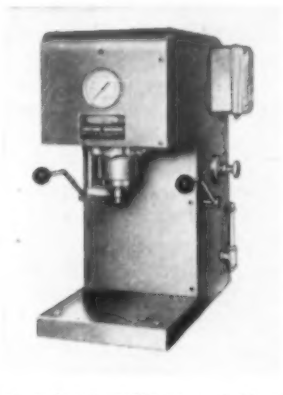
test, try, and prove their merits. Write today!

SHAKEPROOF inc.
fastening Headquarters

DIVISION OF ILLINOIS TOOL WORKS
2501 North Keeler Avenue, Chicago 39, Illinois
In Canada: Canada Illinois Tools, Ltd., Toronto' Ontario

For more details circle NED-5510 on enclosed inquiry slip

HYDRAULIC PRESS offered in 1 and 2-ton sizes



Fast-acting precision Han-D-Press is self-contained hydraulic unit for such light production operations as staking, marking, broaching, punching, riveting and press-assembly. Mechanical dual controls are standard and tamperproof. Nonreturn feature facilitates inching of ram to any desired position during setup work. Constant-volume 3.3-gpm pump is driven by 1½-hp 1800-rpm motor which is available for any standard voltage. Adjustable relief valve allows setting maximum ram pressure at any point above 10 per cent of capacity. Press has 6-in. stroke, 10-in. gap, 6-in. reach and overall height above bench of 28 in. Ram speed of 1-ton model F-10 is 400-ipm with 800-ipm return. Press is supplied with or without removable base. Made by **Hannifin Corp.**, 1128 S. Kilbourn Ave., Chicago 24, Ill.

For more details circle NED-5511 on enclosed inquiry slip

PORTABLE PAINT SPRAYER has adjustable nozzle of carbide

Several design improvements have been incorporated in this Custom Handi Sprayer to adapt it for production spray finishing. Swivel-type nozzle is readily adjustable for off-angle spraying and for use in confined or difficult-of-access places. Operating mechanism is machined from stainless steel and brass to prevent corrosion. Abrasive action of paint is resisted by use of Carboloy nozzle, and because precision hole size is maintained, spray pattern is always uniform. Nozzle pressure of up to 70 psi is sufficient for effective application of all enamels, lacquers, varnishes, disinfectants and water-based chemicals. Volume is controlled with finger-tip adjustment, and 22-oz jar is graduated for concise mixing. Unit operates from standard lighting circuit. Made by **Z & W Machine Products Inc.**, 5100 St. Clair Ave., Cleveland 14, O.

For more details circle NED-5512 on enclosed inquiry slip

DO YOU KNOW? An improved Carfone for two-way mobile radio service has been designed for adjacent channel operation in the 152 to 174-megacycle band. Equipment weighs less than 30 lb; operates from any automobile battery; and consists of Sandwich Case speaker, control unit with palm type microphone, whip antenna and transmitter-receiver unit. Power output is 15 w. Made by RCA Victor Div., Radio Corp. of America, Dept. 200, Scientific Instrument Section, Camden, N. J.

For more details circle NED-5513 on enclosed inquiry slip

A new device

Write for data

ALVEY CASE REJECTOR

This mechanism is ingeniously designed to automatically check the weight of containers. It can be used to determine if a container is within a predetermined weight tolerance. Containers checked as correct continue on the accepted line. Incorrect containers are rejected.

The device will handle up to 15 containers per minute.

You can be certain of full weight cartons if an Alvey Case-Rejector is in your shipping line. Write for questionnaire and details. Write for bulletin CRA-2.

ALVEY Engineered... PACKAGE CONVEYING

ALVEY CONVEYOR MFG. CO.
P. O. BOX 3031
St. Louis 24, Missouri • Sales Offices in Principal Cities

For more details circle NED-5514 on enclosed inquiry slip

Before YOU BUY ANY HYDRAULIC JACK

See HEIN-WERNER

the BEST hydraulic jacks for EVERY industrial use

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORPORATION
WAUKESHA, WIS.

Hein-Werner Hydraulic Jacks are built to give better, longer service at rugged industrial applications. They're made extra strong at points of greatest strain . . . feature the famous Heinite Piston, and are tested at 1½ times rated capacity. They're more economical, more efficient at hundreds of maintenance and production jobs in your plant.

Made in models of 1½, 3, 5, 8, 12, 20, 30, 50 and 100 tons capacity. See your industrial distributor or write us.

For more details circle NED-5515 on enclosed inquiry slip

LEPEL offers a New

LOW COST High Frequency HEATING UNIT

AT A PRICE SO LOW THAT NO MACHINE SHOP, TOOL ROOM OR LABORATORY CAN AFFORD TO BE WITHOUT IT!

Unit illustrated brazing carbide tips to cutting tools. Shanks up to 1½" square can be satisfactorily brazed.

• SMALL and COMPACT
Conveniently operated on bench or table—no mounting necessary.

• ECONOMICAL OPERATION
No special power installation required. Operates on 110 volts, 60 or 50 cycle line at unity power factor.

DOES ALL THESE JOBS *Faster, Better and Cheaper*
BRAZING, SOLDERING HARDENING, ANNEALING DRAWING AND MELTING

• FULLY GUARANTEED
Guaranteed for continuous duty cycle and stated performance.

• LOW COST
Complete unit with line connection and load coil

$780.00 f.o.b. factory

WILL HEAT TO 1500° F.

⅛" steel rod 1" length in approx.	1 second
¼" " " " " "	3 seconds
½" " " " " "	15 seconds
1" " " " " "	60 seconds

Will melt 4 ounces of brass or steel in 4 minutes.
Equally well suited for heating of non-ferrous metals.

HARDEN SOLDER Lepel HIGH FREQUENCY HEATING UNITS BRAZE MELT

LEPEL HIGH FREQUENCY LABORATORIES, Inc., 39 West 60th Street, New York 23, N. Y.

For more details circle NED-5516 on enclosed inquiry slip

YOU CAN'T AFFORD NOT TO USE...

PLASTILUBE

THE SUCCESSOR TO GREASE

In 4 short months, over 900 cost-and-quality-minded firms have bought and now specify PLASTILUBE, *the successor to grease* (compounded with Warren's I-45 and BENTONE, a product of National Lead Co.)

★ NEVER MELTS
★ MULTI-PURPOSE
★ COSTS LESS IN USE

You can't afford NOT to use PLASTILUBE... place your order or write for full details today!

Our 50th Anniversary Year

THE Warren REFINING & CHEMICAL COMPANY
CLEVELAND 15, OHIO

▲ For more details circle **NED-5517** on enclosed inquiry slip ▲

The NEW HYSTER GRID ROLLER

Revolutionizes Black Top Salvage Jobs

HOW IT WORKS... WHAT IT DOES

1 Black top is scarified by motor grader pulling Grid Roller.
2 Scarified black top is pulverized to a maximum of small "fines" by Grid Roller.
3 Pulverized black top is windrowed—road bed cleaned by motor grader—compacted by Grid Roller.
4 Windrow is spread and oil applied, material mixed, relaid and then compacted by Grid Roller. Ready for seal coat.

SAVES UP TO 50% IN TIME, RECLAIMS MATERIAL

1 In *one* day *one* man with motor grader and Grid Roller can salvage and prepare *one mile* of black top road for oiling.
2 Grid Roller produces greater abundance of *fine material.*
3 Oil usage reduced up to ¾ of a gallon per cubic yard—on one county road job a savings of $343 per mile in oil was effected.
4 Grid Roller salvages all types of black top material. *No need to haul away old material.*

Sold exclusively by your "CATERPILLAR" DEALER. CONSULT HIM FOR FACTS, FIGURES, LITERATURE.

HYSTER® COMPANY
2906 N. E. Clackamas Street, Portland 8, Oregon
1806 North Adams Street..... Peoria 1, Illinois

▲ For more details circle **NED-5518** on enclosed inquiry slip ▲

1. No burning at grid-eyes.
2. No burning at taps.
3. No periodic tightening of clamping-nuts.
4. Easy to change taps.
5. Double insulation to ground.
6. Internally clamped, independent of end-frame clamping.
7. Available in capacities up to 150-amperes without paralleling.

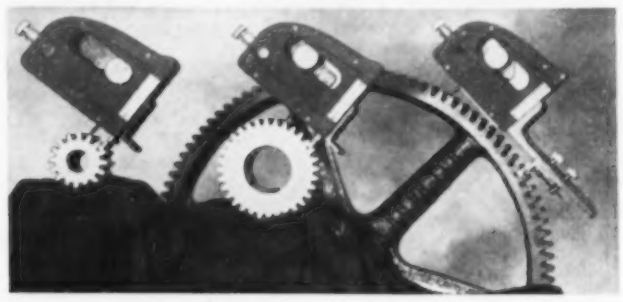
Write for Bulletin 942

THE ELECTRIC CONTROLLER & MFG. CO.
2698 East 79th Street • Cleveland 4, Ohio

▲ For more details circle **NED-5519** on enclosed inquiry slip ▲

GEAR TOOTH MICROMETER
permits single setup for all data

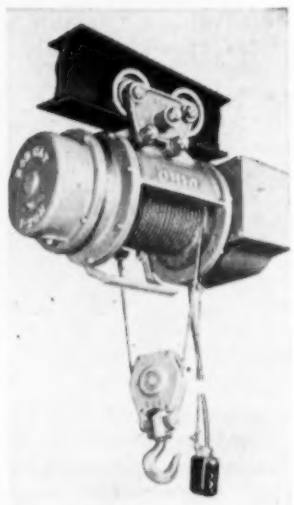
When Gearmaster micrometer is used in conjuction with special spur gear charts, chordal measurement, tooth thickness, spacing, form, pressure angle, backlash al-



lowance, diametral pitch, pitch diameter and possible mandrel runout can be determined at one time. Body of instrument and extension bars are Invar nickel alloy steel that will not expand at any normal temperature. This system of measurement is applicable to spur, helical, herringbone and internal gears as well as to silent and roller chain sprockets. Made by **Urbauer Engineering Co.,** 212 S. Wright St., Naperville, Ill.

▲ For more details circle **NED-5520** on enclosed inquiry slip ▲

ELECTRIC CABLE HOIST
in ½ to 5-ton lifting capacities



Motor of Bob-Cat heavy-duty electric cable hoist is totally enclosed within cable drum to reduce overall dimensions and weight. Double internal gear train incorporates two Weston-type load brakes. Motor brake is of equalizing solenoid type connected to up-limit cutoff switch. Load hook oscillates and swivels on roller bearings and is suspended on 5/16-in. preformed plow steel cable that can be replaced without disassembling any part of hoist.

Designed for operation on 220, 380, 440 or 550-v three-phase 60-cycle current, hoist is furnished with either pendant rope control or push-button control on pendant cable. Illustrated is 1-ton unit for parallel mounting trolley suspension. Right-angle trolley, lug and hook suspension types are also available. Made by **Ohio Electric Mfg. Co.,** 5932 Maurice Ave., Cleveland 4, O.

▲ For more details circle **NED-5521** on enclosed inquiry slip ▲

DO YOU KNOW? Selection of proper safety glasses for 69 specific jobs is simple matter with slide rule type Safety Eyewear Selector. Job classification numbers refer user to sliding selection table that lists such occupations as welders, drillers, platers, riveters and the like. Various safety frames applicable to each task are numbered and illustrated. Available free from Bausch & Lomb Optical Co., 727 St. Paul St., Rochester 2, N. Y.

▲ For more details circle **NED-5522** on enclosed inquiry slip ▲

NEW PRINCO

DENSITROL*
LIQUID DENSITY INSTRUMENT
APPLIES LABORATORY ACCURACY TO PRODUCTION

NOW a fully dependable liquid density instrument is available designed for rugged production work, yet accurate to laboratory standards. Unaffected by ordinary plant conditions, the DENSITROL* provides continuous indicating, recording and/or controlling of process liquid densities.

Overall density limits of the DENSITROL are from 0.6 to 3.5 d. with spans of 0.10 to 0.005 d. full scale or equivalent. It is available with manual or fully automatic compensation for temperatures up to 200° C. Models are furnished for pressures up to 150 p.s.i.

The DENSITROL is supplied in materials suitable for handling any liquids.

Write for full information today.

*Trademark

INDICATING
RECORDING
CONTROLLING

PRECISION THERMOMETER & INSTRUMENT COMPANY
PRINCO
"PRECISION INSTRUMENTS FOR INDUSTRY"
1400 Brandywine Street, Philadelphia 30, Pa.
In Canada: PEACOCK BROTHERS Limited

▲ For more details circle **NED-5523** on enclosed inquiry slip ▲

New Method Gives Precise Control in Air Conditioning

NIAGARA "Controlled Humidity Method" Uses HYGROL, Hygienic Liquid Absorbent

● This new method gives complete control of temperature and relative humidity, holding constant conditions or varying them at the will of the user. Especially, it provides dry air at normal atmospheric temperatures with little or no refrigeration required.

The air is filtered and then enters a chamber where it passes thru a spray of "Hygrol" Liquid (a hygienic hygroscopic chemical that absorbs the air-borne moisture and contains no salts or solids to precipitate). In the same chamber, cooling coils remove the latent heat of evaporation and also sensible heat as required.

The absorbent liquid spray falls into a tank at the base. It is piped to a concentrator, removing moisture taken from the air. The re-concentrated liquid returns to the system. This process is continuous, and the apparatus operates always at full capacity.

This equipment is manufactured in units providing from 1000 to 20,000 CFM of conditioned air.

Installations have been made in food and chemical process industries, in packaging hygroscopic products, for preventing condensation of moisture on metals and other products in storage, in air conditioning for laboratory control and for human comfort.

For further information, write Niagara Blower Co., Dept. ED, 405 Lexington Ave., New York 17, N. Y.

▲ For more details circle **NED-5524** on enclosed inquiry slip ▲

DESIGNED RIGHT...BUILT RIGHT FOR

Long Life

AND TOP PERFORMANCE

The sure way to get the best in air-cooled power — insist on Briggs & Stratton, the recognized leader. No other single-cylinder, 4-cycle, air-cooled engines are so universally preferred by manufacturers, dealers, and users alike. This is proved by the fact that there are more Briggs & Stratton engines in service—on farm equipment, industrial machines, tools, and appliances—than all other makes of gasoline engines in their field combined.

BRIGGS & STRATTON CORPORATION
Milwaukee 1, Wisconsin, U. S. A.

4 CYCLE BRIGGS & STRATTON GASOLINE ENGINES
World Wide FACTORY SUPERVISED SERVICE
Powered Power FOR INDUSTRIAL CONSTRUCTION RAILROAD AND FARM EQUIPMENT

In the automotive field Briggs & Stratton is the recognized leader and world's largest producer of locks, keys and related equipment.

▲ For more details circle **NED-5525** on enclosed inquiry slip ▲

. . the most permanent FLOORING known to INDUSTRY

Flash-Stone EMERITE FLOORING is the only complete Emery Stone concrete assembly-package in the entire field. Equally suited for restoration of old concrete floors or new constructions. Recommended for areas subjected to punishing contacts or aggressive agents.

WRITE FOR INFORMATIVE LITERATURE

FLASH-STONE COMPANY, INC.
ERIE AND PULASKI AVES., PHILA. 40, PA.

For more details circle NED-5528 on enclosed inquiry slip

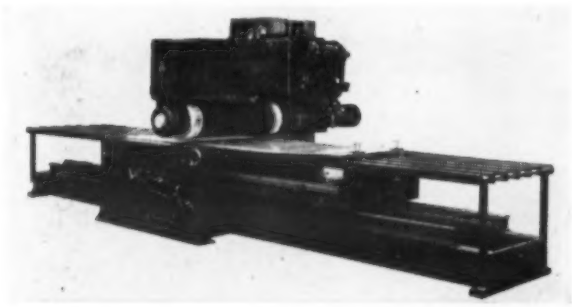
DRUMHANDLING TRUCK for containers 7 in. to 4½ ft high

Fiber or steel drums or any other container with bead, rim or chime can be conveyed safely and easily by Liftomatic truck. Since container is held and carried by two jaws which close and open automatically on upper rim, there is no danger of bottom being injured. Jaw housing is quickly adjustable on main post to accommodate drums of various heights. Since size of wheel base is less than diameter of average drum, operator can remove container from center of line without moving adjacent drums and can place it in any location without manual handling. Built of steel to take loads up to 1000 lb, truck weighs only 40 lb. It is furnished with full roller-bearing wheels with 10 x 2.50 solid rubber or 8 x 2.50 cushion tires. Made by **Marvel Industries, Inc.**, 5150 W. Church St., Skokie, Ill.

For more details circle NED-5530 on enclosed inquiry slip

SHEET BUFFING MACHINE is of oscillating roll-type design

With main spindle powered by 50 to 100-hp motor and oscillating mechanism powered by 3-hp motor, this 48 in. wide open-side oscillating type sheet buffing machine

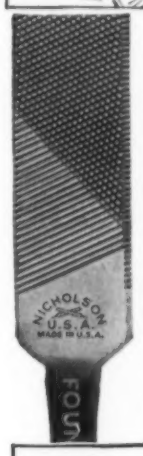


performs heavy duty production finishing of ferrous and nonferrous sheets. It has hydraulic table and power elevating and lowering head for 18-in. diameter buff or Tampico brush roll. Stroke can be varied from ½ to 2 in., and range is from 50 to 150 cycles per minute. Machine is built in table widths up to 72 in. and table lengths of 8 ft and over. Made by **Hill Acme Co.**, 6436 Breakwater Ave., Cleveland 2, O.

For more details circle NED-5531 on enclosed inquiry slip

DO YOU KNOW? "Mineral Wool Insulation for Heated Industrial Equipment" is title of new 36-page illustrated commercial standard CS117-49 issued by the Department of Commerce. Loose, granulated and felted forms of mineral wool as well as blanket, block and industrial batt forms are covered. Specifications, properties and engineering data are presented together with 26 drawings showing how to apply mineral wool to both flat and curved surfaces. Price is 15 cents. Obtainable from Supt. of Documents, U.S. Government Printing Office, Washington 25, D. C.

For more details circle NED-5532 on enclosed inquiry slip



LIKE many other good shop foremen, Pop has made file life a factor in his figuring of production costs. Because: being, by nature, a "wear-away" tool, there is definitely a turning point in a file's productivity—where the cost of a fresh file is less than the cost of the time the old file wastes.

An important step is to choose files that go farthest before reaching the turning point toward *unprofitable efficiency*. It can be determined by tests and general experience. Nicholson and Black Diamond brands welcome such tests. You can make them yourself.

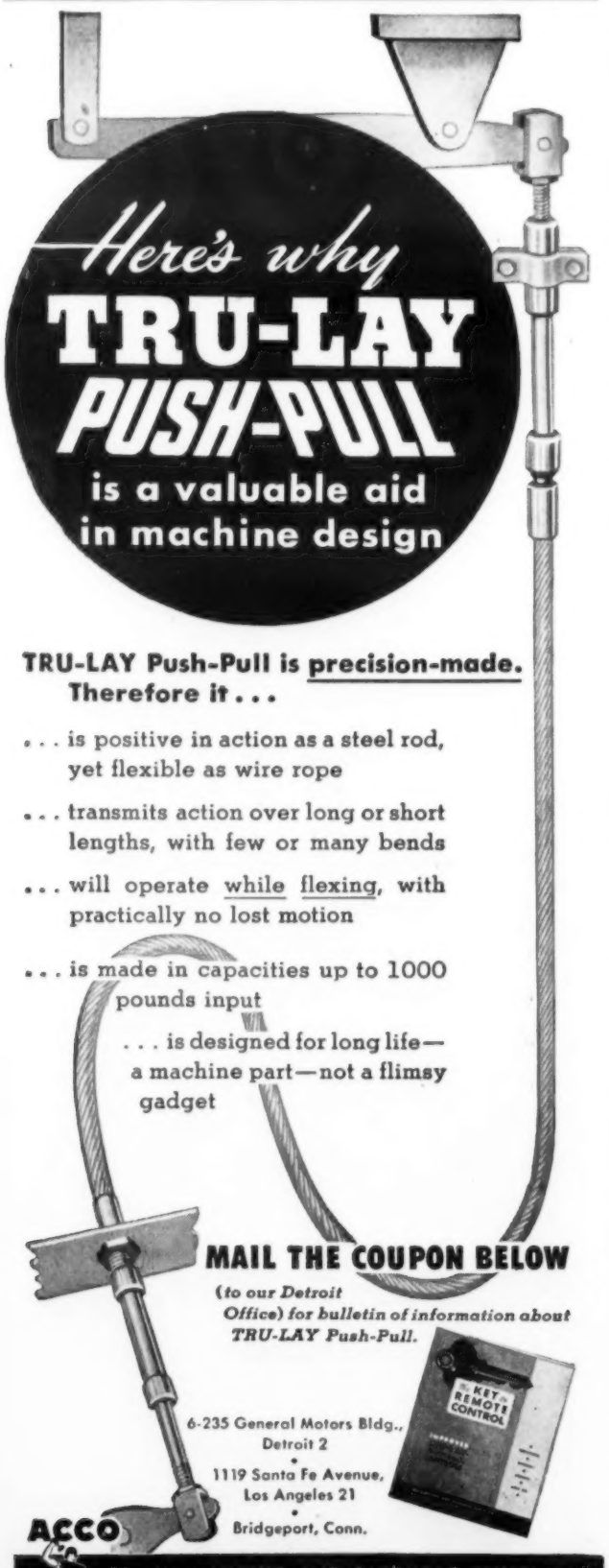
SOLD THROUGH DISTRIBUTORS

FREE BOOK, "FILE FILOSOPHY" — 48 illustrated pages on kinds, use, care of files. Write to —

NICHOLSON FILE CO., 34 Acorn St., Providence 1, R. I.
(In Canada, Port Hope, Ont.)

NICHOLSON U.S.A. NICHOLSON A FILE FOR EVERY PURPOSE BLACK DIAMOND TRADE MARK

For more details circle NED-5534 on enclosed inquiry slip



TRU-LAY Push-Pull is precision-made. Therefore it . . .

. . . is positive in action as a steel rod, yet flexible as wire rope

. . . transmits action over long or short lengths, with few or many bends

. . . will operate while flexing, with practically no lost motion

. . . is made in capacities up to 1000 pounds input

. . . is designed for long life—a machine part—not a flimsy gadget

MAIL THE COUPON BELOW

(to our Detroit Office) for bulletin of information about TRU-LAY Push-Pull.

6-235 General Motors Bldg., Detroit 2
•
1119 Santa Fe Avenue, Los Angeles 21
•
Bridgeport, Conn.

ACCO

AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE

Please send me copy of descriptive bulletin DH-87-D-1.

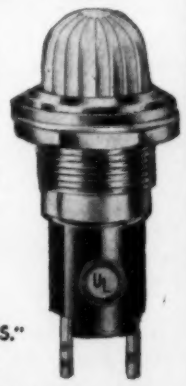
Name _____
Company Name _____
Address _____
City _____ Zone _____ State _____

For more details circle NED-5529 on enclosed inquiry slip

DO YOU KNOW?

—that a PILOT LIGHT CAN IMPROVE YOUR PRODUCT . . . add attraction—safety—service?

Ask DIALCO
—what lamp to use
—how to use it
—what it will do
—what it will cost



THIS MAY BE THE ONE
Designed for low cost NE-51 Neon
• Built-in Resistor • Patented
• U/L Listed • Rugged
Catalogue Number 521308 — 997 for 110 or 220 volts.

SAMPLES for design purpose NO CHARGE

NEW! Write for the "HANDBOOK OF PILOT LIGHTS."
Write us on your design problems.

Foremost Manufacturer of Pilot Lights
The DIAL LIGHT COMPANY of AMERICA
900 BROADWAY, NEW YORK 3, N. Y.

For more details circle NED-5533 on enclosed inquiry slip

EXTRA SPEED with FIBREX® RED WHEELS

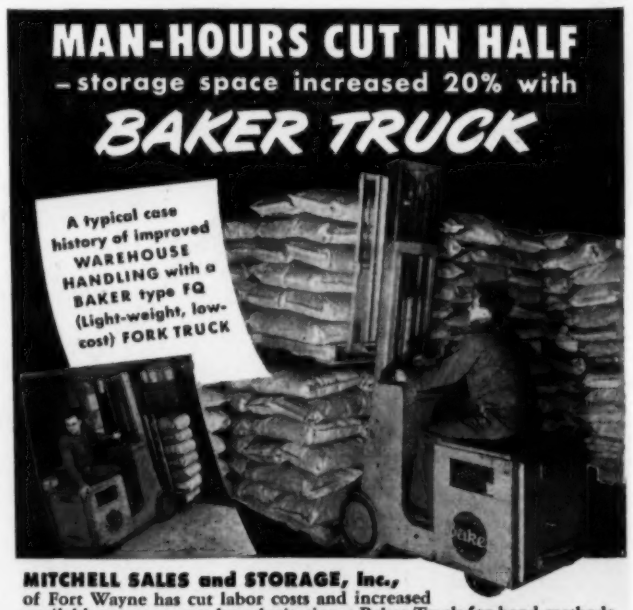
Faster than grinding — Fibrex Red Wheels head into the work and actually *cut* away excess metal. And, using the *same* wheel you can follow through immediately with smoothing and finishing-up. Put these sensational performers to work for you. Write for Bulletin ESA-186.

SIMONDS ABRASIVE CO.

SIMONDS ABRASIVE CO., 5514 TACONY ST., PHILA. 37, PA.
DISTRIBUTORS IN ALL PRINCIPAL CITIES

For more details circle NED-5535 on enclosed inquiry slip

MAN-HOURS CUT IN HALF
– storage space increased 20% with
BAKER TRUCK



MITCHELL SALES and STORAGE, Inc., of Fort Wayne has cut labor costs and increased available storage space by substituting a Baker Truck for hand methods. Quantity movements of 100 lb. bags of flour, sugar and other items from and into box cars and highway trucks, and stacking to the ceiling storage are now handled in unit loads by the Baker Truck. Formerly each bag had to be man-handled at least twice to complete in and out movements. In addition to a 50% cut in man-hours, stacking bags 12 instead of 10 high has added 20% effective storage space. Mitchell estimates that the truck, now 8 months old, paid for itself the first month it was in service.

Similar savings may be possible in your plant or warehouse. A Baker Material Handling Engineer will show you how.

BAKER INDUSTRIAL TRUCK DIVISION *of The Baker-Raulang Company*
1245 West 80th Street • Cleveland 2, Ohio

Baker INDUSTRIAL TRUCKS

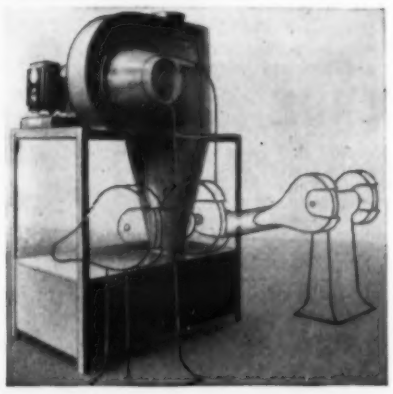
For more details circle NED-5536 on enclosed inquiry slip

STOP DUSTS

. . . with low cost, unit-type DUSTKOPS. They're Ductless . . . quickly installed.

250cfm to 3600cfm
¼hp to 5 hp

Immediate shipment from stock means immediate stopping of dusts, lint, dirt, shavings etc.



For the least cost-ly dust collecting method describe your problem. No obligation.

Aget-Detroit Co.
Ann Arbor, Mich.

For more details circle **NED-5537** on enclosed inquiry slip

Fascuts give blemishes the brush automatically ..outlast former brushes 3 to 1

SURFACE imperfections . . . those minute blemishes and scratches that become magnified after plating to mar the finish on tubing . . . are here being removed automatically by Osborn Power Brushing. The resulting surface uniformity cuts hand finishing after plating *to lower manufacturing costs.*

In Osborn's constant search for applying the *right brush* to the *right job,* an **O**sborn **B**rushing **A**nalysis showed that the surface of the tubing could be further refined on this operation and brush life increased by changing over to Osborn Fascut® Brushes. Performance records bear out the **OBA** recommendations. In addition to less hand finishing now required after plating, Osborn Fascuts are outlasting other brushes formerly used by more than 3 to 1.

Undoubtedly, an **O**sborn **B**rushing **A**nalyst can help you on problems of cleaning, finishing and polishing. It is his job to improve the quality of your products and cut your costs through brushing. His services, backed by Osborn's extensive technical facilities, are yours for the asking. He'll gladly demonstrate how you, too, can profit by new Osborn techniques. Ask today for an **OBA!** *The Osborn Manufacturing Company, Dept. 324, 5401 Hamilton Avenue, Cleveland 14, Ohio.*

YOU CAN IMPROVE FINISH AND CUT COSTS BY BRUSHING

LOOK FOR THE NAME

OSBORN

RECOGNIZED EVERYWHERE FOR THOROUGH APPLICATION ENGINEERING

For more details circle **NED-5538** on enclosed inquiry slip

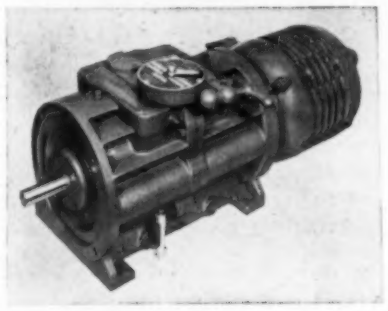
PROGRAM RECORDER-CONTROLLER
standard cams are easily changed

By means of standard cams used in program recorder-controller, it is possible to change rate rise, length of hold and holding temperature or pressure without cutting cam for each cycle or inserting different cams. Holding temperature is changed by turning knob for setting control temperature.

Instrument has 9-in. chart and is housed in 12-in. case. Standard temperature and pressure assemblies are interchangeable. Controller can be modified to control two variables at one time, to include automatic reset after completion of cycle, to stop cam at any critical point in cycle, and to provide for addition of signaling devices or use of air or electric relays or switches. Made by Gotham Instruments Div., **American Machine & Metals, Inc.,** 149 Wooster St., New York 12, N. Y.

For more details circle **NED-5539** on enclosed inquiry slip

VARIABLE SPEED TRANSMISSION
compact unit in 1½ to 3-hp sizes



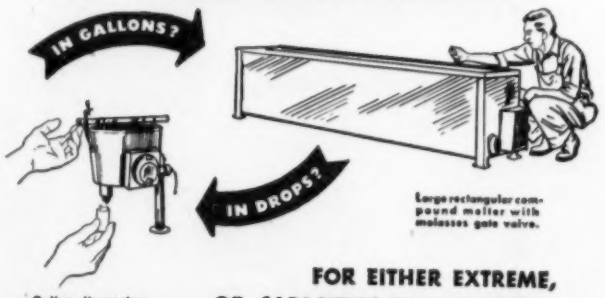
Speeds from any desired maximum to zero can be obtained from model 300 variable speed transmission. Lever or micrometer controls afford extreme accuracy in setting speed. Mechanical, electrical and pneumatic types of remote control can be obtained. All-metal self-lubricated unit is offered with or without motor or with built-in motors of all types. In addition to standard drive illustrated, transmission can be supplied with built-on reduction or step-up gearbox. Also available are reversing model which delivers all speeds forward and reverse without change of input rotation and 5-hp unit for centrifugal pump or blower applications. Transmission housing ends are machined to accommodate NEMA D flange motor, and unit can be mounted vertically for mixing or agitating applications. Made by **Graham Transmissions Inc.,** 3753 N. Holton St., Milwaukee 12, Wis.

For more details circle **NED-5540** on enclosed inquiry slip

DO YOU KNOW? "Lokuts" has been selected as the trade name of line of torque type self-locking nuts. Available in broad range of standard nut sizes, these fastenings afford high resistance to loosening under conditions of vibration. Because they incorporate prevailing torque locking principle, they lock at any position on bolt and are suitable for spacing and spring compressing applications. Made by Shakeproof Inc., 2541 N. Keeler Ave., Chicago 39, Ill.

For more details circle **NED-5541** on enclosed inquiry slip

HOW DO YOU MEASURE YOUR COMPOUND MELTING REQUIREMENTS?



FOR EITHER EXTREME, OR CAPACITIES IN BETWEEN... *LOOK TO STA-WARM*

Any size of compound melter can be a Sta-Warm melter because "The Sta-Warm Method" of engineering and building heating, conveying and dispensing equipment for compounds has almost infinite flexibility.

Beyond matching your hourly or daily output requirements, Sta-Warm melting equipment will meet your temperature-range demands, your electric power supply, your production line set-up and your dispensing scheme.

For help in solving compound melting problems, look to Sta-Warm. Why not outline your problem today in a letter addressed to . . .

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST. • RAVENNA, OHIO

For more details circle **NED-5542** on enclosed inquiry slip

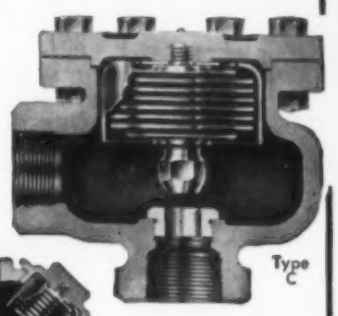
Large Processor Achieves

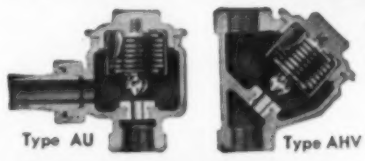
MORE UNIFORM HEATING CYCLES

with Nicholson Steam Traps

The positive action of Nicholson traps was recently used successfully by a chemical maker to smooth out the heating cycles of cookers at 50 to 60 minutes, against previous periods up to 105 minutes. Steam flow was upped to 3000 lbs. an hour against 2000 for the previous mechanical type.

5 TYPES FOR EVERY APPLICATION, process, heat, power. Sizes ¼" to 2"; pressure to 225 lbs. Send for Bulletin 450





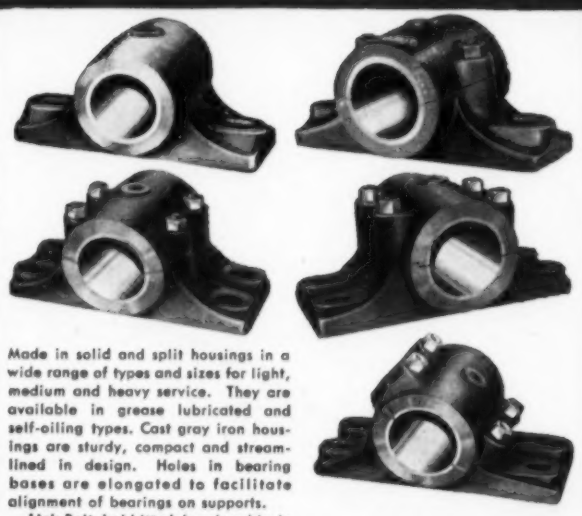
BULLETIN 450 or see Sweet's

W. H. NICHOLSON & CO. 162 OREGON STREET WILKES-BARRE • PA.

Sales and Engineering Offices in 53 Principal Cities

For more details circle **NED-5543** on enclosed inquiry slip

from STOCK— LINK-BELT Babbitted Bearing Pillow Blocks



Made in solid and split housings in a wide range of types and sizes for light, medium and heavy service. They are available in grease lubricated and self-oiling types. Cast gray iron housings are sturdy, compact and streamlined in design. Holes in bearing bases are elongated to facilitate alignment of bearings on supports.

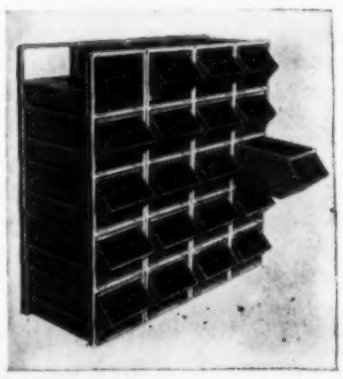
Link-Belt babbitted bearing blocks give long, trouble-free performance and thus help meet industry's demand for lower operating expense. Contact our nearest office.

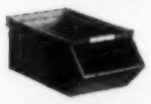
LINK-BELT COMPANY 11,948

Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Johannesburg. Offices, Factory Branch Stores and Distributors in Principal Cities.

For more details circle **NED-5544** on enclosed inquiry slip

REDUCE HANDLING
of Tools, Parts and Materials





STACKBINS are individual hopper-fronted stacking bins, designed for storage, transportation, assembly.

STACKRACKS are individual units which lock together to form racks of any size, shape or capacity. Stackbins slide like drawers in individual Stackracks

Because Stackbins are portable containers—not fixtures—tools, parts and materials can be carried to departments, from machine to machine, or held in stockrooms without being transferred from one container to another. Stored in Stackracks, any Stackbin is instantly accessible when its contents are needed — without disturbing any other bin.

MOST SIZES IN STOCK

STACKBINS IN STACKRACKS

Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

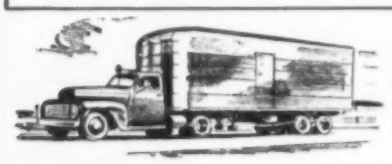
Write Stackbin Corp., 1081 Main St., Pawtucket, R. I.

STACKBIN SYSTEM *"Stacked and Still Accessible"*

For more details circle **NED-5545** on enclosed inquiry slip

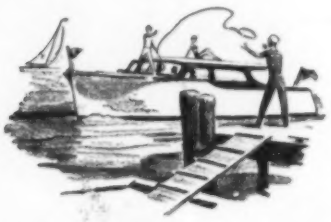
How Production-Wise Manufacturers

SAVE SANDING COSTS



ON LAND

The gleaming stainless steel that makes up these modern truck trailer bodies is polished with BONDITE* Jewelox paper belts. Because they cut faster, last longer, Jewel Abrasive Belts can roll up sanding savings for you!



ON THE SEA

Torn covers on drum sanders were causing costly slow-downs in finishing plywood sheets for this boat builder. AP Sales Engineer recommended change to super-tough Jewel Bondex Garnet Fibre. Builder reports, "These Jewel drum covers are the best ever!

*Moisture repellent and heat resistant.

Whatever your product, chances are you can cut costs — do better work like this — with Jewel Coated Abrasives. See your distributor or write us now!

Abrasive Products, Inc.

SOUTH BRAINTREE 85, MASSACHUSETTS · MAKERS OF JEWEL COATED ABRASIVES

For more details circle NED-5552 on enclosed inquiry slip

a good steer for reduced maintenance

Mono-Cushion
INDUSTRIAL VEHICLE TIRES

TOUGH ALL THE WAY THROUGH
CUSHION ALL THE WAY THROUGH

Easy-steering Mono-Cushions soak up more bumps and jolts than any other type of industrial vehicle tire, size for size—and reduce your maintenance costs accordingly. In steering linkages, bearings, differentials, universals, transmissions — wherever shock or shock load is a factor — Mono-Cushions will save you money on repairs, cut vehicle downtime.

They'll save you money in other ways, too. Mono-Cushions will reduce your tire costs, to begin with. And they'll reduce load breakage and floor wear. They require no servicing and they're puncture-proof — go anywhere in the plant. And drivers like the easy ride and easy steering they get with Mono-Cushions.

The leading manufacturers of industrial vehicles use Mono-Cushions as original equipment. Replacement tires available through the manufacturer of your equipment or his distributors.

THE MONARCH RUBBER COMPANY
200 LINCOLN PARK HARTVILLE, OHIO

SPECIALISTS IN INDUSTRIAL SOLID TIRES AND MOLDED MECHANICAL RUBBER GOODS

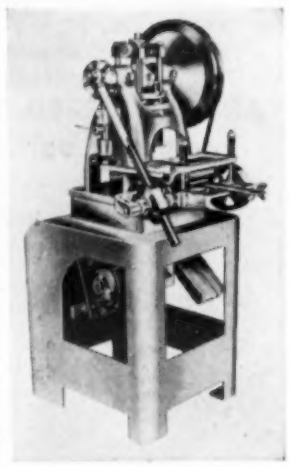
For more details circle NED-5553 on enclosed inquiry slip

ELECTRONIC TIMER
available in three timing ranges

Automatic control of operation, limit and sequence timing are afforded by this electronic timer. Timing ranges of 0.06 to 1.2-seconds, 0.6 to 12-seconds and 6 to 120 seconds can be obtained. Relay armature is only moving part and standard electronic tube is employed. Load requirements are 15-amp inrush, 10-amp carry and 5-amp break. Detachable back plate permits mounting device directly on rigid conduit or any flat surface. Dual set of contacts permits control of two operations on same time schedule. Made by **General Electric Co.**, Control Div., Schenectady 5, N. Y.

For more details circle NED-5554 on enclosed inquiry slip

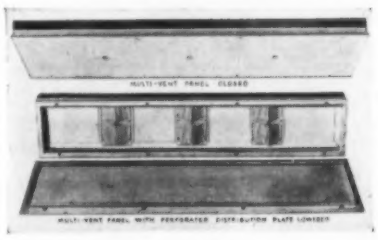
SMALL AUTOMATIC PRESS
high speed model is rated 5 tons



Several improvements have been incorporated in this redesigned 5-ton Hi-Speed automatic press. Base encloses motor, belt and pulley for safe operation and neatness of appearance. Rigid feed is easy to set, and spring tension is distributed evenly to assure accuracy of feed. Heavy gear rack has simple adjustment and affords positive operation. Other features are dependable roller lifting mechanism and positive knockout for compound dies. Made by **Di Machine Corp.**, 2701 W. Irving Park Rd., Chicago 18, Ill.

For more details circle NED-5555 on enclosed inquiry slip

CEILING VENTILATION PANEL
for low velocity air distribution



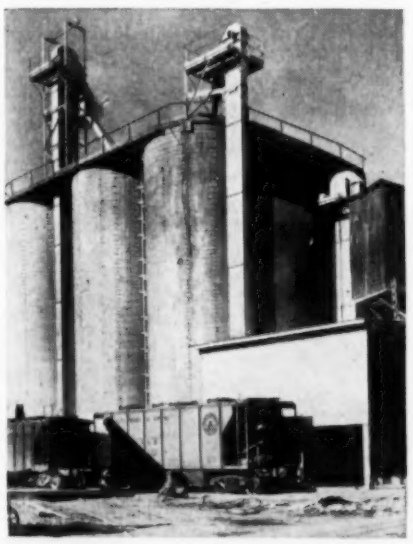
Supplementing line of 2 and 3-ft widths, this 1-ft wide Multi-vent ceiling panel affords uniform distribution of air without drafts. Any dirt which may pass through primary filters of air conditioning or ventilating system is partially deposited on metal distribution plate or acoustical pans which are easily lowered and wiped clean. Available in lengths of 2, 3, 4, 5 and 6 ft, panels have one to three pressure displacement valves. Panels blend well with acoustical or other ceiling treatment. Made by **Pyle National Co.**, Multi-Vent Div., 1342 N. Kostner Ave., Chicago 51, Ill.

For more details circle NED-5556 on enclosed inquiry slip

JEFFREY BUCKET ELEVATORS

New Improved Design

- Welded Angle Casings — heavy gauge steel. Dust-tight—Water-tight
- Improved Head and Boot Sections
- Increased Bearing Protection
- Removable Hood
- Large Clean-out Doors both sides
- Large Inspection Doors for access to chain and buckets
- Take-ups furnished for Head or Boot if desired — self-aligning, plain or anti-friction bearings



A few features of our Standard Bucket Elevators. A type and size to meet any requirement. Complete drawings available. Backed by years of engineering experience, hundreds of installations. May we hear?

JEFFREY
THE JEFFREY MANUFACTURING CO.
952 N. Fourth Street Columbus 16, Ohio

For more details circle NED-5557 on enclosed inquiry slip

THIS CATALOG GIVES THE ANSWERS

DISTILLED WATER?

DEMINERALIZED WATER?

In hundreds of manufacturing processes, where complete purity is needed, Barnstead Stills provide the highest-quality, lowest-cost, chemically pure, sterile water from ½ to 1000 gallons per hour. With over 100 different models to choose from, Barnstead can provide the exact still to fit your particular needs. For Barnstead Laboratory and Industrial stills are the proven standard of the scientific and industrial world.

Where modern manufacturing processes require only high-test mineral-free water, Barnstead Demineralizers are the best producers . . . 5c per 1000 gallons with a minimum of supervision and maintenance. Many new industries are turning to Barnstead Demineralized Water for greater production, fewer rejects and better quality control.

FREE

Catalog #123 gives both sides of the Pure Water Picture. Since Barnstead makes both stills and demineralizers, you'll find this catalog complete, authoritative, unbiased. Write Today!

Barnstead STILL & STERILIZER CO.

First in Pure Water since 1878

16 Lanesville Terrace, Forest Hills, Boston 31, Mass.

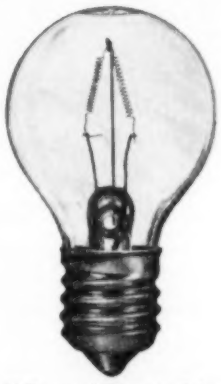
For more details circle NED-5558 on enclosed inquiry slip

New lamp bulb deodorizes

. . . in clothes dryers, refrigerators, air-conditioners!

HERE'S a new, easy way to control objectionable odors! It's the new General Electric ozone lamp that freshens air by adding ozone. Ozone, a form of oxygen, chemically destroys some odors—masks many others—adds a clean, fresh, outdoor smell.

The new lamp adds sales appeal, has negligible operating cost. For complete data write or phone your nearest General Electric Lamp District office.



G-E ozone lamp, actual size.

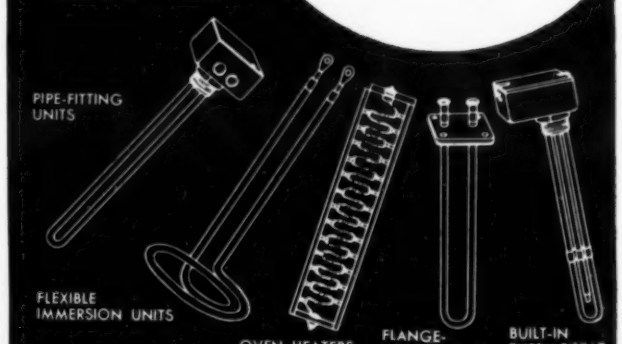
GENERAL ELECTRIC

For more details circle NED-5559 on enclosed inquiry slip

THERMALINK Electric HEATING ELEMENTS

OVER 600 STANDARD MODELS & TYPES

IMPROVE YOUR ELECTRICALLY HEATED PRODUCTS AND EQUIPMENT WITH THERMALINK ELEMENTS



SPECIALISTS IN CORROSION-RESISTANT IMMERSION HEATERS

Write Dept. N for Literature

ELECTRO-THERM INC.
8024 GEORGIA AVE., SILVER SPRING, MD.

For more details circle NED-5560 on enclosed inquiry slip

MULTIPLE DRILLING with a MULTI-DRILL INCREASES CAPACITY UP TO 800%

ADJUSTABLE TO ANY HOLE PATTERN FITS ANY DRILL PRESS

If your production requires drilling from 2 to 8 holes in a work piece, a MULTI-DRILL will cut costs and speed output up to 800%. The MULTI-DRILL is universally adjustable to any hole pattern—is compactly built to permit easy, unhampered operation with drill jigs or other special fixtures. Ruggedly built to take the wear and tear of high production work, the MULTI-DRILL will handle your long and short run multiple drilling jobs with ease and economy. The MULTI-DRILL will drill on hole centers as close as 1/2"—handle drill sizes up to 3/8" in steel. Special adaptations available.

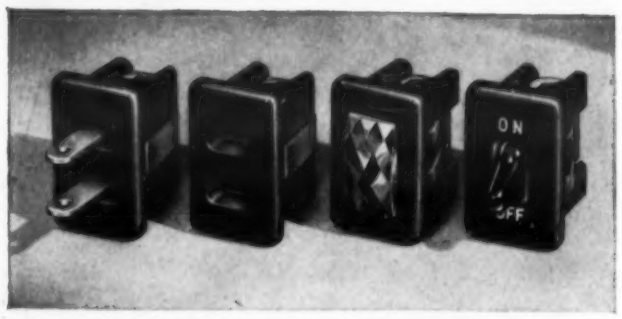
There is a Commander MULTI-DRILL Distributor in your area. Write for his name, literature and complete details.

COMMANDER MFG. CO.
4220 WEST KINZIE ST. CHICAGO 24, ILL.

Product of *Commander* — Builder of the *Commander Tapper*

▲ For more details circle NED-5561 on enclosed inquiry slip ▲

New, Improved Snap-Ins



AGAIN LEAD THE WAY TO COST-SAVING AND BETTER PERFORMANCE IN YOUR PRODUCTS

"Diamond H" Snap-Ins . . . toggle switches, convenience outlets, pilot lights and inter-connecting load plugs . . . have always been tops for performance and for cost-saving on users' assembly lines. Just snap them into their holes, spring clips hold them tight. Wire them up before or after.

NOW . . . NEW IMPROVEMENTS MAKE THEM BETTER THAN EVER!

● *All* . . . have wider face areas with wider flanges. Greater overlap eliminates need for exacting tolerances in porcelainizing or other finishing around 21/32" x 1 7/32" installation holes.

● *Switches* . . . operate on principle new and exclusive in this application. In "on" position, contacts are held together under pressure of spring action to assure positive, *unfailing* action. Ratings: 15 and 20 A.—125 V.; 10 A.—250 V., A.C. also H.P. ratings.

● *Pilots* . . . with larger, *faceted* lenses, give greatest light output of any comparable pilots on the market. Rated 115 V. or 230 V., A.C.

● *Convenience Outlet* and *Inter-Connecting Load Plug* . . . like all "Diamond H" products . . . are ruggedly built for long service, in black, white, brown or special color plastic for top appearance in your product.

Write today for complete details on how "Diamond H" Snap-Ins will help you make a better product at lower cost.

THE HART MANUFACTURING COMPANY
204 Bartholomew Ave., Hartford, Conn.

▲ For more details circle NED-5562 on enclosed inquiry slip ▲

ROTARY
INDUSTRIAL
BRUSHES

Let "PITTSBURGH" solve your brush problems

Modern production looks to rotary power-driven brushes for processing most metal and plastic surfaces, and the right brush means *better quality work, increased production, lower costs.*

Our skilled brush engineers will design and build power-driven brushes to meet your particular requirements. Or, you may find what you need in the regular Pittsburgh line, because there's a Pittsburgh brush for every industrial use.

See your Supplier or contact PITTSBURGH PLATE GLASS COMPANY, Brush Div., Dept. M-4, 3211 Frederick Ave., Baltimore 29, Maryland.

PITTSBURGH *Power Driven* BRUSHES

BRUSHES • PAINT • GLASS • CHEMICALS • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

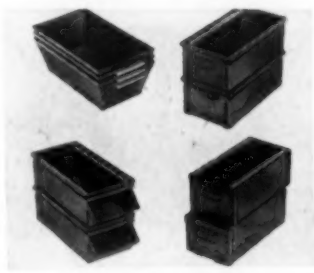
▲ For more details circle NED-5563 on enclosed inquiry slip ▲

METAL PARTS WASHER
utilizes active wash action

Designed for removing oil, chips, grease, dirt, carbon smut and other foreign substances from metal and other parts, improved Super-Soak washer (*See NED Apr. '48*) employs new direct gear-drive. Operated by 1/4-hp single-phase electric motor, drive automatically and slowly lowers and raises loading tray into and out of soaking solution. Combined soaking and 'swishing' action effects thorough cleaning. Rear sectional view in illustration shows simple operating mechanism. Made by **Super-Soak Co.,** 1441-3 S. 65th St., West Allis 14, Wis.

▲ For more details circle NED-5564 on enclosed inquiry slip ▲

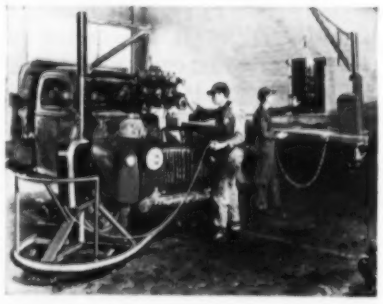
STEEL SHOP BOXES
facilitate small-parts handling



Built in wide range of standard sizes, types and combinations, these steel shop boxes are suitable for most parts handling requirements. Shown clockwise from upper left of illustration are nesting, stacking, staggered stacking and hopper front stacking types. Boxes incorporate full length bottom runners, one-piece bottom and end construction and double reinforced corners. Elimination of end offsets simplifies emptying. Made by **Union Metal Mfg. Co.,** Dept. NE, Canton 5, O.

▲ For more details circle NED-5565 on enclosed inquiry slip ▲

PORTABLE ELECTRIC HOIST
mountable on dolly or truck bed



Designed for one-man operation, Lift-All portable electric hoist will lift, lower, stop and hold up to 2000-lb loads. Push-button control on cord enables operator to move about freely for load guidance. Boom is easily adjustable for height and swings completely around with load. Lift is powered by 6-v reversible motor which permits car battery to be used on dolly, or when mounted on truck bed, unit can be operated from truck battery. Drum is equipped with 40 ft of 1/4-in. six-strand steel cable for long lifts and to make unit adaptable as winch. Made by **Lift-All Equipment Co.,** Dept. ND, 400 N. E. 97th Ave., Portland 16, Oreg.

▲ For more details circle NED-5566 on enclosed inquiry slip ▲

Amazing FLASH BOX OPENER
Opens Any Carton Quicker . . . Cleaner

Exclusive patented blade holder adjustable to varying thicknesses of carton covers.

THE ONLY CARTON OPENER THAT GIVES YOU ALL THESE ADVANTAGES:

Penetrates exactly under the outer cover thickness ● Protects contents of carton ● Cuts clearly to permit re-use ● Prevents accidents ● Saves time ● Eliminates fatigue. *Already accepted by leading industries.*

Retail Price $1.75

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

▲ For more details circle NED-5567 on enclosed inquiry slip ▲

Here's Magnetic Protection Against Tramp Iron At LOWEST POSSIBLE COST!

Chocolate going over Perma-Plate at rate of 10,000 lbs. hr. Magnet picks up various forms of iron filings.

Dings Perma-Plate Magnet
NON-ELECTRIC • PERMANENT • LIGHTWEIGHT

ABOLISH tramp iron threats to your machinery. Gain constant, permanent protection at low cost. The Dings Perma-Plate requires no electricity—no electrical accessories—no maintenance.

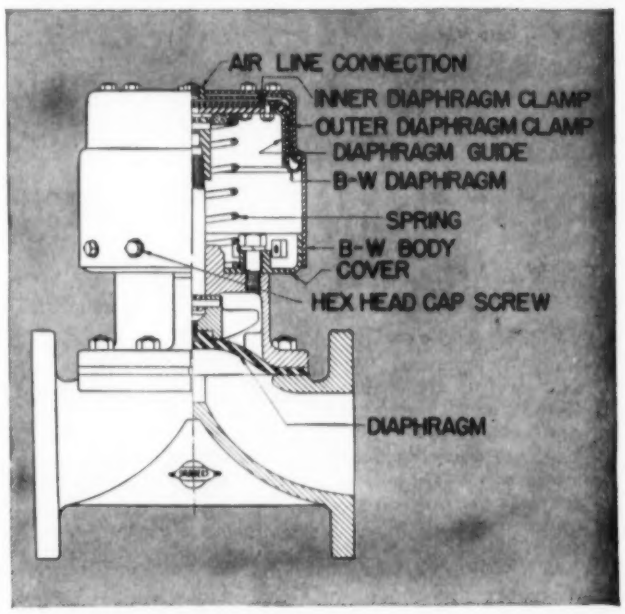
Easily installed in chutes, ducts, trays, spouts, over conveyor belts, etc., the powerful Perma-Plate gives you *maximum* tramp iron removal—gives you CERTIFIED magnetic strength, GUARANTEED magnetic permanence. Learn the details—SEND for BULLETIN.

DINGS MAGNETIC SEPARATOR COMPANY
4758 W. Electric Ave., Milwaukee, Wis.
All Types of Electric and Non-Electric Magnetic Separators for Every Purpose.

Dings *Certified* MAGNETIC STRENGTH

▲ For more details circle NED-5568 on enclosed inquiry slip ▲

Grinnell-Saunders Diaphragm Valves *power-operated* by Bendix-Westinghouse Rotochamber Top-works



● Rolling sleeve type of seal . . . leakproof and practically frictionless. No packing glands! No lubrication!

● Compact pressed steel cylinder. Height from center line to top of 2" flanged air-to-close valve, only 9 3/4"; or air-to-open valve (in open position) only 14 1/8".

● Tested up to seven million strokes without sign of wear.

● Operated with air or hydraulic pressures up to 105 lbs. For pressures up to 100 pounds in the line being controlled, only 50 lbs. actuating pressure required under average conditions. No pressure reducing valves needed for pressures up to 105 pounds because of adjustable stem travel stops incorporated in the valve bonnet design.

● Easily adjusted without removing top-works from body.

YOU GET THESE ADVANTAGES IN ANY GRINNELL-SAUNDERS DIAPHRAGM VALVE:

Diaphragm isolates working parts from the fluid, preventing corrosion of these parts and contamination of the fluid; diaphragm lifts high for streamlined flow; diaphragm presses tight for positive closure, even with suspended solids in the line; body, lining and diaphragm materials to meet service conditions; simple maintenance.

Get the whole story on this and other Grinnell-Saunders Diaphragm Valves. Send for Catalog.

GRINNELL

Grinnell Company, Inc., Providence 1, R. I. Branches: Atlanta • Billings • Buffalo Charlotte • Chicago • Cleveland • Fresno • Kansas City • Houston • Long Beach Los Angeles • Milwaukee • Minneapolis • New York • Oakland • Philadelphia Pocatello • Sacramento • St. Louis • St. Paul • San Francisco • Seattle • Spokane

▲ For more details circle NED-5569 on enclosed inquiry slip ▲

GRC offers quick service, low cost on strong, good-looking wing nuts of rust-proof zinc alloy. All commercial finishes, all popular thread sizes. Wing nuts with special threads or untapped wing nuts also available. Inquiries invited for special wing nut designs.

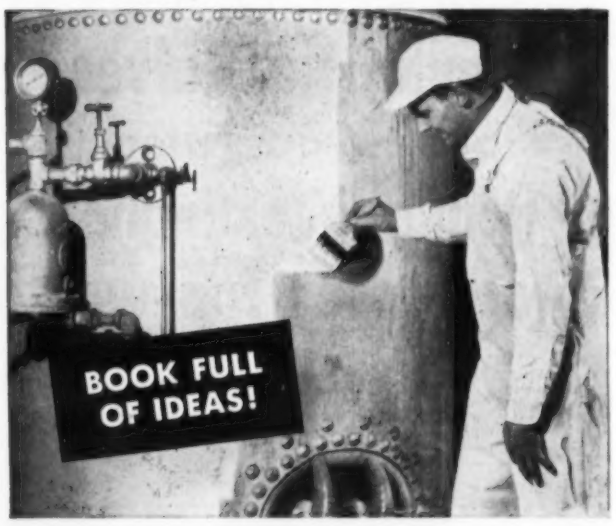
Write today for samples and prices

IMMEDIATE DELIVERIES IN ANY QUANTITY

GRIES REPRODUCER CORP.

82 Willow Avenue, New York 54, N. Y.

For more details circle **NED-5570** on enclosed inquiry slip



HOW TO GET LASTING PROTECTION FOR HOT SURFACES

THIS NEW FREE BOOK tells you why you need low viscosity, fast drying aluminum enamels with a bright finish to get maximum insulation and to avoid peeling and discoloration on surfaces where the temperature exceeds the boiling point. They must contain special heat-resisting ingredients.

We want you to know that there are differences in aluminum paints. In this book are many valuable facts about the types of aluminum paint; Aluminum Metal and Masonry Paint for moisture and abrasion resistance; Aluminum House Paint for maximum protection of weather-exposed wood; Aluminum Enamel for heated surfaces.

Alcoa does not make paint, but this book will help you get better value, better results from the paint you buy. In addition to information about types of paint, you'll find coverage tables, answers to painting questions and suggestions for savings through the use of the right aluminum paint for many industrial applications.

Just attach this coupon to your letterhead and this valuable book will be sent to you.

ALUMINUM COMPANY OF AMERICA
Paint Service Bureau, 1735H Gulf Bldg., Pittsburgh 19, Pa.
Please rush me free copy of: *"Painting with Aluminum".*
Name (Please print)_____
Address_____
City_____ State_____
We plan to paint the following:_____

Look for this shield on aluminum paints made by many paint manufacturers using ALCOA PIGMENTS.

The RIGHT aluminum paint for this job is ALUMINUM ENAMEL.

ALCOA ALUMINUM ALBRON

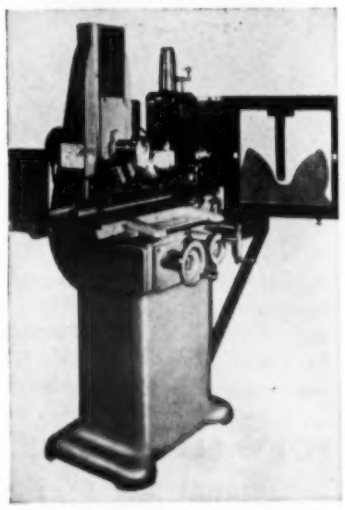
For more details circle **NED-5571** on enclosed inquiry slip

INSULATED ELECTRODE HOLDER
handles 1/16 to 3/16-in. electrodes

Strong 'lock-jaw' electrode grip along with easy thumb pressure release is afforded by Lincoln LJ-1 250-amp holder. Being small in size and lightweight, it can be used with heavy gloves and in corners and other confined areas. Tip of jaw end is covered with asbestos - base compound which is highly flexible and resistant to high temperatures, impact and abrasion. Since electrode is held close to end of tip, holder can be used in close quarters without danger of grounding. Cam jaw construction gives one position for downhand welding and second for overhead operations. Made by **Lincoln Electric Co.**, Dept. AP-574, Cleveland 1, O.

For more details circle **NED-5572** on enclosed inquiry slip

CONTOUR GRINDER
has optical projection system for image, profile and templet grinding



Combining three operating techniques, Visual-Grind machine is especially adapted for contour grinding of tungsten carbide to close tolerances. Form is generated by progressive movements which are directly controlled by magnification. Capacity of machine is 6 x 16 x 8-in. when 7-in. wheel is used. Magnifications of 3.125:1, 50:1, 62.5:1 and 100:1 are available.

Image grinding is made possible by Bounce-Back feature. Light is condensed onto oblique reflector which directs beam against front of workpiece. Image is reflected horizontally through aperture in reflector, passes through precision lenses for magnification, and is projected on screen without inversion or reversal. Profile projection is performed by placing auxiliary mirror behind workpiece, which shows as sharp dark image on brightly illuminated screen.

Templet technique combines above two types of projection. Polished precision templet of intended shape is fastened to front of workpiece. Both parts are projected on screen simultaneously, and workpiece can then be ground to desired form by matching its image with that of templet. Templet can be used to guide stock removal when wide contours at high magnifications are too large to be drawn on screen.

Ground glass 18-in. square viewing screen is standard, though bright line or other types common on comparators can be employed. Made by **Cleveland Grinding Machine Co.**, 6514 St. Clair Ave., Cleveland 3, O.

For more details circle **NED-5573** on enclosed inquiry slip

30 TONS CAN BE WEIGHED IN SUSPENSION BY YALE LOAD KING CRANE SCALE

- **Saves time, effort and money by eliminating a handling operation.**
- **Net weight of load is always indicated on the easy-to-read dial chart.**
- **Lower swivel hook is "safety-first" non-fracturing type—opens slowly when scale is overloaded.**
- **"U-bolt" safety strap prevents damage to lever system in case of overload.**
- **Exclusive MAGNETROL mechanism assures long life of sustained accuracy.**

Write for literature

YALE THE YALE & TOWNE MANUFACTURING CO.
Roosevelt Boulevard • Philadelphia 15, Pa.
HAND LIFT AND POWER TRUCKS • HAND AND ELECTRIC HOISTS • INDUSTRIAL DIAL SCALES

For more details circle **NED-5574** on enclosed inquiry slip

NEW LONG LIFE PUMP FOR FINE MESH MATERIALS

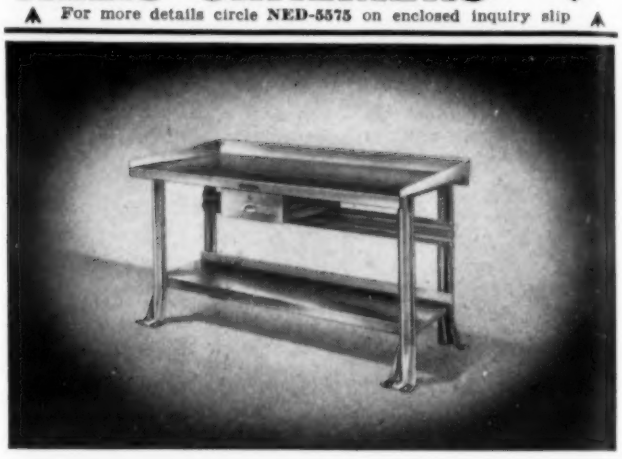
FOR MANY APPLICATIONS — particularly in handling 1/8" to 325 mesh abrasive materials — this new rubber-lined pump will outlast conventional or special types of metal pumps! Here's the reason: rubber lining offers as much as fifteen times the resistance to abrasion that the hardest special materials offer. Available in a wide range of sizes to fit almost every need.

Ask your nearest A-C Sales Office for your copy of New Bulletin 08B7311 today!

A-3056 ALLIS-CHALMERS, 918A SO. 70 ST. MILWAUKEE, WIS.

ALLIS-CHALMERS

For more details circle **NED-5575** on enclosed inquiry slip



The HALLOWELL WORK BENCH OF STEEL

Standardized, *ready-made* HALLOWELL Work Benches save trouble and expense of "building your own"; provide superior equipment for maximum productivity.

Interchangeable units readily adaptable to individual requirement. Easily bolted together to form continuous bench, yet may be taken down and reassembled as single units. Rigid, heavy-duty construction eliminates bolting to the floor, minimizes installation and maintenance.

HALLOWELL Work Benches do credit to any plant. Functional design and attractive appearance encourages better plant housekeeping and worker performance.

Full details in Bulletin 701.

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 24, PENNSYLVANIA

For more details circle **NED-5576** on enclosed inquiry slip

Would you like to have the opportunity to slash your spring costs?

THE KEY to lower spring costs is in design and manufacture. Perhaps in your own case, a small modification in design which would not affect your product's performance would make it possible to substantially reduce the cost. Or maybe your springs are being made in several operations when one would suffice. Skilled spring-makers here at Accurate have the experience—the "know-how"—to recognize such conditions and to correct them! Our manufacturing facilities are modern and complete—we have the equipment to do the job right, at the lowest cost to you.

Write, wire or phone, today; your inquiry will receive prompt attention.

ACCURATE SPRING MFG. CO.
3805 W. Lake Street Chicago 24, Illinois

Accurate Springs — Springs — Wire Forms • Stampings

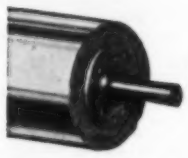
For more details circle **NED-5577** on enclosed inquiry slip

What's YOUR Roll Problem?

The Answer is often:

USE

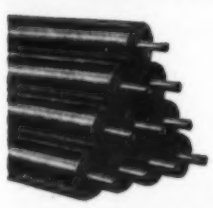
SHAF-TITE* ROLLS



Many Patented Constructions

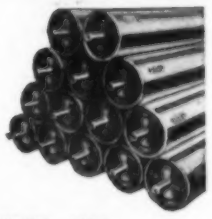
Choice of

METAL, RUBBER, or WOOD ROLLS



Send For NEW ROLL CATALOG No. 48

Industrial Roll Division



RODNEY HUNT MACHINE CO.

973 Main Street
*Reg. U.S. Pat. Off.

RODNEY HUNT

Orange, Mass., U. S. A.

For more details circle NED-5578 on enclosed inquiry slip

* OLSON CONVEYORS

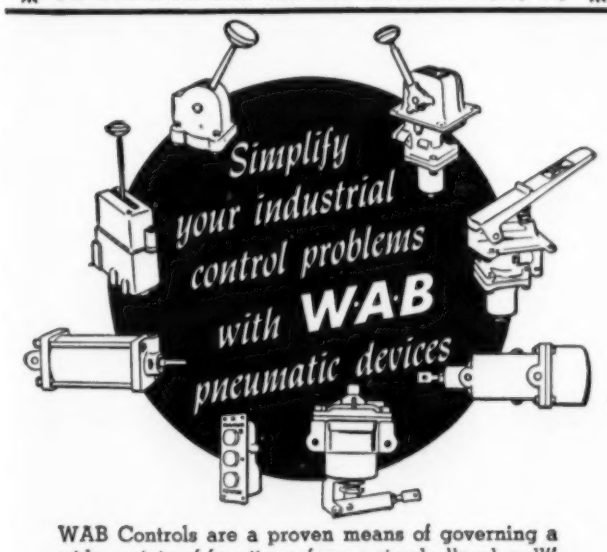
SINGLE UNITS—COMPLETE SYSTEMS

• Put material handling on a continuous basis with Olson conveyors. In single units or in complete systems, Olson conveyors meet every requirement for lifting, lowering or on-the-level handling. Call Olson today for details on standard or custom-engineered equipment . . . for the answer to your problem through continuous material flow.

SAMUEL OLSON MFG. CO., INC.

2423 Bloomingdale Ave., Chicago 47, Illinois

For more details circle NED-5579 on enclosed inquiry slip



WAB Controls are a proven means of governing a wide variety of functions, from a simple "push-pull" operation to precise positioning. Successfully serving on production machines, hoists, cranes, excavating equipment, oil drilling rigs, boats, etc. Illustrations show only a few of the many devices available. Ask for Bulletin 9481-1 for full details.

Westinghouse Air Brake Co.

Industrial Division: Wilmerding, Pa.

DISTRIBUTORS THROUGHOUT THE UNITED STATES
CONSULT YOUR CLASSIFIED DIRECTORY

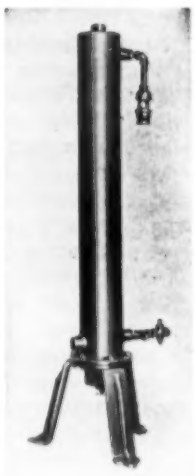
For more details circle NED-5580 on enclosed inquiry slip

INDUSTRIAL TRUCK WHEEL
is pressed steel, rubber tread type

Made of two pressed steel disk sections welded together, Steelite lightweight industrial truck wheel weighs from 1 to 9 lb less than comparable cast-iron rubber-tread wheel. Two sets of hardened ball-bearings in each wheel eliminate wear on axles and assure easy rolling. Lubricant reservoir and grease seal hold sufficient grease for normal life of wheel, but grease fitting is provided for refilling reservoir if necessary. Made by **American Pulley Co.**, 4245 Wissahickon Ave., Philadelphia 29, Pa.

For more details circle NED-5581 on enclosed inquiry slip

VERTICAL AFTERCOOLER
for small compressed air units



Type V-907 vertical aftercooler is designed to deliver small quantities of compressed air in cool and dry state. Unit is offered in two sizes, and air inlet and outlet pipe sizes up to 1 in. can be specified. Smaller size measures 30-in. overall and cools up to 20 cfm free air, while larger size measures 48-in. overall and cools 30 to 50 cfm free air. Outer steel shell encloses tube nest through which cooling water passes. Hot air entering cooling chamber is guided slowly about cooling tubes from intake at bottom to top outlet. Separated moisture drops by gravity to trap below bottom head. Made by **Jas. A. Murphy & Co.**, Dept. N, Fifth and Vine Sts., Hamilton, O.

For more details circle NED-5582 on enclosed inquiry slip

DIESEL ENGINE
delivers 195-375 hp at 900-1000 rpm

Available in six or eight in-line cylinder designs, TS four-cycle diesel engine can be mounted either on concrete base or on welded-steel skids where portability is desired. It has 7-in. bore and 8½-in. stroke and is single-acting engine with weight of about 30 lb per horsepower and fuel consumption of 0.40 lb per hp-hour. Normal starting is by 250-psi air admitted to all cylinders in turn through starting-air distributor. Other methods of starting can be furnished. Made by **Ingersoll-Rand Co.**, Dept. A, 11 Broadway, New York 4, N. Y.

For more details circle NED-5583 on enclosed inquiry slip

STOP DUST IRRITATION ...with NEW Sensational Flex-a-foam FILTER MASK

Trial Sample $1.50 Postpaid

Easier to breathe through and talk through than an ordinary pocket handkerchief — yet filters non-toxic nuisance dusts as small as 1/25000 of an inch.

- Extremely light weight—only 1 oz. complete.
- Self-adjusting to every face size.
- Attractively styled to suit the most discriminating wearer.
- Simple in design: only four parts—four tough, long-wearing, interlocking parts.
- Only respirator made with long-lasting washable filter—can be used over and over again.

Write TODAY for Descriptive Circular

Here's dust protection... your workers will welcome and WEAR!

THE GOGGLE PARTS COMPANY

1468-70 W. 9th Street • Cleveland 13, Ohio

For more details circle NED-5584 on enclosed inquiry slip

Don't Let DIRT · CHIPS · WATER ruin your Air Tools and Equipment

3 Newly Designed Products give you low cost protection

Any air system will function more efficiently with less maintenance with clean air. Now you can be assured of clean air for your air tools, air cylinders, and equipment—air free from corrosive water, rust, scale, dust, dirt, chips, smudge. Now you can l-e-n-g-t-h-e-n tool life, and operate more efficiently. Schrader offers three improved devices for your air line, a filter, a strainer, and a combination filter and trap.

A NEW AIR LINE FILTER—New filter element cleans air, traps moisture. Install ahead of every unit in system.

B IMPROVED AIR LINE STRAINER—Strains out rust, scale, chips. Easy to clean.

C NEW AIR LINE FILTER AND WATER TRAP—A high capacity element for removal of dirt, scale, rust, and moisture from air without restricting air flow. May be connected to permanent drain line. Can be serviced without disturbing any connections. Two air outlets.

Write for more information and literature about Schrader Air Filters, Air Strainers and Combination Air Filter and Water Trap. For information about hundreds of other Schrader Products . . . Air Line Fittings, Air Cylinders, Valves, Press Controls, etc., ask for complete 72-page catalog.

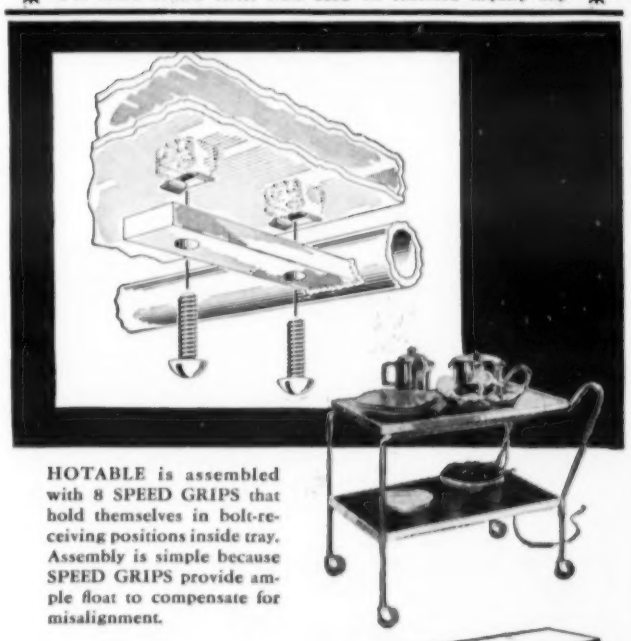
Schrader PRODUCTS CONTROL THE AIR

A. SCHRADER'S SON DEPT. ND-8

478 Vanderbilt Ave., Brooklyn 17, N. Y.

Division of Scovill Manufacturing Company, Incorporated

For more details circle NED-5585 on enclosed inquiry slip



HOTABLE is assembled with 8 SPEED GRIPS that hold themselves in bolt-receiving positions inside tray. Assembly is simple because SPEED GRIPS provide ample float to compensate for misalignment.

EASY-TO-ASSEMBLE HOTABLE

GETS *warm* RECEPTION BY DEALERS...
MAKES *cool* SAVINGS FOR MANUFACTURER

"Dealer good will stepped up . . . orders increased . . . assembly savings approaching the spectacular!" These are the benefits provided by SPEED GRIPS*, according to Mr. L. L. Salton, Vice-President and General Manager of Salton Mfg. Co., Inc., New York City.

Here's what happened when Salton replaced 8 weld nuts with SPEED GRIP Nut Retainers on their Hotable serving wagons:

- Tables can now be shipped "knocked down" for easy assembly by dealer.
- Securely attached nut reduces dealer rejects.
- More compact carton reduces manufacturer shipping and packaging costs—saves dealer storage space, permits placing of larger orders.
- Permitted transfer of $1,200 worth of welding equipment to other jobs.
- And—*provided 80% savings in assembly cost!*

Yes, SPEED GRIPS are accelerating the trend toward to-be-assembled furniture and thousands of other products. Find out more about the cost-saving powers of this and other SPEED NUT brand fasteners. Also write for interesting, helpful SPEED NUT "Savings Stories" booklet. TINNERMAN PRODUCTS, INC., Cleveland, Ohio. In Canada: Dominion Fasteners Ltd., Hamilton. In Great Britain: Simmonds Aerocessories, Ltd., Treforest, Wales.

TINNERMAN Speed Nuts

FASTEST THING IN FASTENINGS

For more details circle NED-5586 on enclosed inquiry slip

ONE OF A LINE of GUARDIAN CONTROLS

for INDUSTRIAL and AIRCRAFT Applications

● Try the Guardian Series 335 D.C. Relay, one of hundreds of basic Guardian types. A general purpose relay with a wide range of applications, the Series 335 is built to the rigorous standard of aviation relays. The Series 335 D.C., like most Guardian Relays, is now available Hermetically Sealed.

Write for your copy of the new Guardian Catalog 5-H featuring Hermetically Sealed Relays.

Series 335 D.C. Relay

GUARDIAN ELECTRIC
1626-J W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

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Clean as a Whistle!

IF you clean metal parts here's how Pangborn can save you money...

"Pangborn Blast Cleaning Equipment cleans metal parts at a profit!" say satisfied users from coast to coast. One manufacturer writes that Pangborn saves him $5452 yearly on cleaning costs. Another small plant finds Pangborn cleans *more* metal parts, yet saves $11,000 annually on labor!

Savings up to 50% and more in cleaning time are not unusual for Pangborn users. A plant in Texas reports Pangborn Equipment cleans what was formerly a full *8-hour* job in *just 20 minutes.*

If you want to cut cleaning costs—Pangborn is your best buy! For 46 years Pangborn has been famous for the right cleaning equipment for every job.

MAKE A PROFIT CLEANING METAL PARTS!

Find out how Pangborn Blast Cleaning Equipment can save you money. Mail coupon or write today for free Bulletin 1200. Address: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Maryland.

Look to Pangborn for the Latest Developments in Blast Cleaning and Dust Control Equipment.

Pangborn

BLAST CLEANS CHEAPER
with the right equipment for every job

MAIL TODAY

PANGBORN CORPORATION
2400 Pangborn Blvd., Hagerstown, Md.

Gentlemen: Yes, I want to save money cleaning metal parts. Send me my free copy of Bulletin 1200.

NAME.....

COMPANY.....

ADDRESS.....

CITY.....ZONE.....STATE.....

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SOCKET SET & CAP SCREWS
wire-size usable in small assemblies

These multiple-spline socket set and cap screws can be obtained as small as No. 2 and No. 0 wire size, respectively. They are recommended for applications in such equipment as scientific and surgical instruments, cameras, electronic devices, clocks and computing machines. Strength of screws is dependent on design of socket rather than on material from which they are made, and they can be tightened and loosened many times without damage to socket. Made by **Bristol Co.,** Mill Supply Div., 30 Bristol Rd., Waterbury 20, Conn.

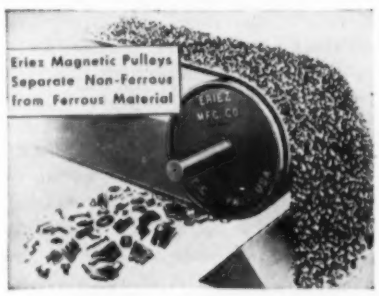
▲ For more details circle **NED-5589** on enclosed inquiry slip ▲

AUTOMATIC PROCESS TIMER
mounts in 3-3/16-in. diameter hole

Rated 10 amp on 110 v and available for 60, 50 and 25-cycle operation, Cycl-Flex automatic process timer can be obtained with time scales from 0-30 seconds to 0-10 hours. Timer is designed with auxiliary contacts operated by clutch solenoid which together with those operated after time delay provide four different load circuit combinations. Either momentary or maintained contact pilot switch can be used to start device. Timer is easily set, and movement of elapsed time pointer is clearly visible because of 9-in. time scale. Applications include flush mounting in control panels of electronic heating equipment, molding machines, photographic printers and chemical processing equipment. Made by **Eagle Signal Corp.,** Dept. NED, Moline, Ill.

▲ For more details circle **NED-5590** on enclosed inquiry slip ▲

MAGNETIC PULLEYS
have greater pull and holding power



Redesigned and improved permanent magnetic pulleys provide increased magnetic power, lighter weight and greater structural strength. They are recommended for removing tramp iron from materials being processed in chemical, food, metalworking, textile and ceramic industries. Pulleys are made in sizes to carry 12, 15, 18 and 20-in. belts of rubber, canvas, leather, stainless steel sheet or other nonmagnetic material. In operation, tramp material flows on belt over magnetized pulley until carried under and out away from magnetic field where it drops into separate bin. Made by **Eriez Mfg. Co.,** 1325 E. Twelfth St., Erie, Pa.

▲ For more details circle **NED-5591** on enclosed inquiry slip ▲

SMALL PARTS

- **WIRE STRAIGHTENING, CUTTING** in perfect, straight lengths to 12 ft., from .0015 to .125 dia.
- **WIRE FORMS** From .0015 dia. to .080 dia.
- **SMALL METAL STAMPINGS** From .0025 to .035 thickness From .062 to 3 inches wide

We make a specialty of the production of parts for electronic and cathode ray tubes

We have the skill, capacity, experience and modern equipment to turn out an infinite variety of small forms, parts and stampings in ferrous and non-ferrous metals and alloys *accurately, economically* and on *time.*

WRITE for illustrated folder showing scope, variety and industries served—or SEND BLUEPRINTS, or samples, for prompt quotations.

ART WIRE & STAMPING CO.
227 HIGH STREET NEWARK 2, NEW JERSEY

▲ For more details circle **NED-5592** on enclosed inquiry slip ▲

HAVE YOU EVER BOUGHT YOUR WIFE A MINK COAT AT RABBIT PRICES?

SAVE UP TO 85% IN WAR SURPLUS

We've gone **NUTS!!**

Just Purchased 180,000 lbs. of the FINEST PRECISION Made ELASTIC & FIBER LOCK NUTS!! All are NEW!

Here's your chance to "STEAL" Aircraft Quality STOP NUTS at less than the cost of common commercial hex nuts. They're ALL NEW Cad plated Steel and a large quantity are even pre-tapped for easier wrenching. ELASTIC or FIBER LOCK SEAL gives a Positive, Shake-proof, Vibration & Rust Resistant fastener. No lock washer necessary. One Operation does the job. Just run on the nut. Ideal for use in all types of metal fabrication, assembly, construction etc.

ALL NEW! AND LOOK AT THESE PRICES for ELASTIC or FIBRE LOCK STOP NUTS

Prices per 100 in these quantities - Special Discount for larger quantities

	100	1000	10,000	25,000	50,000	100,000	500,000
640	$.49	$.25	$.21	$.19	$.17	$.15	$.13
832,836	.59	.31	.28	.25	.23	.21	.19
1032	.59	.31	.28	.25	.23	.21	.19
1/4-28FL	.63	.39	.36	.33	.30	.27	.25
1/4-28 PT	.63	.39	.36	.33	.30	.27	.25
5/16-24PT	.84	.64	.61	.58	.56	.54	.49
3/8-24PT	.94	.74	.71	.68	.66	.64	.59

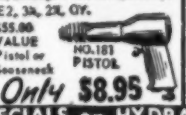
Note: FL means Fiber Lock (not pre-tapped.) PT means Pre-tapped. ESSNA Brand

AIR TOOLS

ARO PISTOL **22.50** AIR DRILL or AIR MOTOR with 1/4" Jacobs chuck.

10,000 in various makes, sizes & types. Cleco, Aro, Ingersoll Rand, Chicago Pneumatic, Buckeye E2, 3A, 2A, GY.

$55.00 VALUE Pistol or Gooseneck



NO.181 PISTOL

Only **$8.95**

NEW BEARINGS

These are the Finest, Precision, AIRCRAFT BEARINGS!! We have more than 168 types and sizes in TREMENDOUS QUANTITIES!!! Needle, Roller, Recessed, Rod End, Shielded, Unshielded, Self-aligning, etc. Made by some of the WORLD'S LEADING MANUFACTURERS OF BEARINGS... Yours at a FRACTION of COMMERCIAL PRICES. Write for complete list. Adapt to your use!

PALLEY SPECIALS on HYDRAULIC PUMPS & CYLINDERS

P-1 PESCO PUMP - Positive displacement gear type. Capacity: 1 gal. per minute, at 1500 RPM at 1500 PSI. Operating speed: 3700 RPM Intermittent max. 4900 RPM. Rotation: either direction with slight adjustments. **$9.49**

BENDIX HAND PUMP

Provides instantaneous power to operate Hydraulic Systems. Delivers 3000 to 5000 PSI. Has built-in reservoir and Pressure Relief Valve. Can be adapted to 100's of uses in simple hydraulic systems. Used - Good Condition **11.95** **$15.95**

Order from this Ad. All sales final. All Prices F.O.B., Glendale. Pay by M.O. or Check. P.O.'s Accptd. from D.&B. Firms. ½ deposit with C.O.D.'s.

NEW HYDRAULIC CYLINDER

NEW **22.50**

Gives 20,000 lb. thrust (push or pull) using 1,500 PSI line pressure as obtained from our hyd. pumps. Will produce up to 40,000 lb. thrust with 3,000 PSI. CAN ALSO BE OPERATED ON LOW PRESSURE AIR SYSTEMS. 4" bore, 18" stroke, 30½" length. Ideal for Road—Farm—Shop Machinery.

P-4 VICKERS ANGLE PUMP

Positive displacement type, angle piston. Displaces .507 cu. in. per revolution. Has capacity of 6 gal. per min. at 3000 RPM at 1500 PSI. Pressure limit is 1500 PSI continuous, 1875 for 15 sec. Operating speed of 3750 RPM, intermittent maximum 4500 RPM. Rotates to the right only. Motor **$14.49**

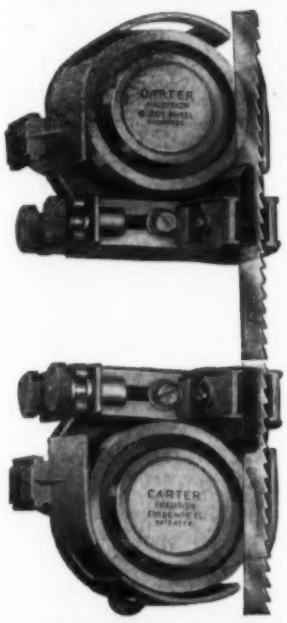
PALLEY SUPPLY CO. DEPT. NED-8 6331 SAN FERNANDO RD. GLENDALE 1, CALIF.

NEW 1950 CATALOG 72 pages of Machine Tools (taps, drills, dies reamers, etc.) Hydraulic Cylinders & Valves, Air Tools, Bearings. Write Today for your Copy.

▲ For more details circle **NED-5593** on enclosed inquiry slip ▲

OPERATION... Carter ... More Savings!

Carter Micro-Precision Guides Trim Time and Material Waste from Your Bandsawing



You need more than a "good operator" before you'll cut wasteful costs from your woodworking production. By holding the blade close to the work, Carter Guides save expensive material waste. Reduces blade breakage to an absolute minimum . . . helps chisel excessive time from cumbersome work.

Carter's new Templet Pins doubly increase the guide's efficiency. Allow your operators to cut more pieces per hour. New Templet Pin Blocks will fit any Carter Precision Guide. Install Carter Micro-Precision Guides with Templet Pins in your plant now!

Write Today!

. . . for your FREE bulletin plus detailed data on how Carter Guides can be applied to your operations.

CARTER PRODUCTS COMPANY
969 Michigan Trust Bldg., Grand Rapids, Mich.

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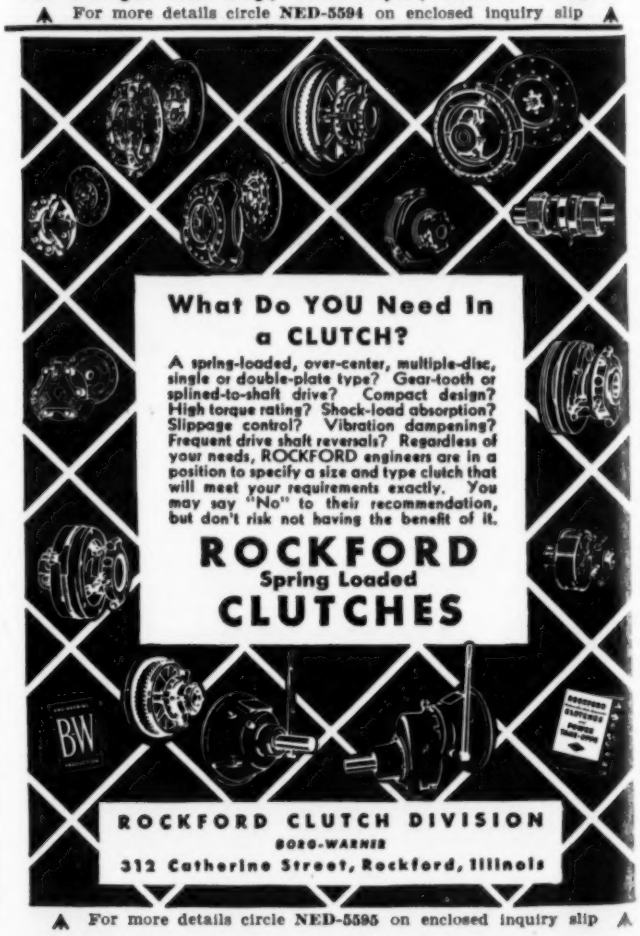


▲ For more details circle **NED-5595** on enclosed inquiry slip ▲

Kester Solder

Kester Flux-Core Solders are made only from newly mined grade A tin and virgin lead. Fluxes are chemically and scientifically correct.

Eliminates Rejects

Rejects are eliminated when the correct solder for the job is used. Kester makes over 100,000 different types and sizes of Flux-Core Solder.

Faster

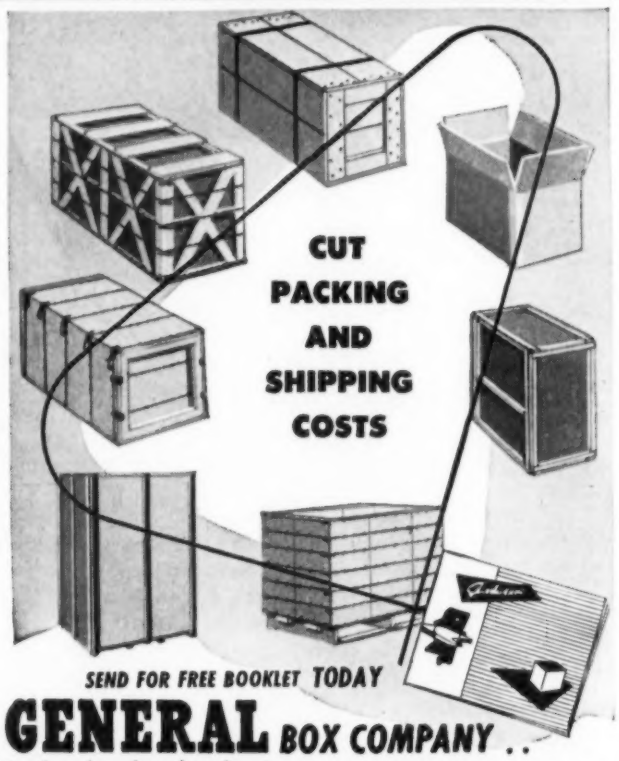
Using Kester "Speed" Solders will increase the output of your assembly lines.

KESTER SOLDER COMPANY
4201 Wrightwood Avenue
Chicago 39, Ill.
Newark, N. J. Brantford, Can.

KESTER SOLDER

SEND FOR FREE MANUAL: "SOLDER AND SOLDERING TECHNIQUE"

For more details circle NED-5596 on enclosed inquiry slip



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GENERAL BOX COMPANY ..

★ ★ ★ ★ ★ engineered shipping containers

GENERAL OFFICES: Illinois & Dearborn Sts., Chicago 10, Ill.
DISTRICT OFFICES AND PLANTS: Cincinnati, Denville, N. J., Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, Sheboygan, Winchendon. Continental Box Company, Inc., Houston, Dallas General Box Company of Mississippi, Meridian, Miss.

For more details circle NED-5597 on enclosed inquiry slip

NEW! STAINLESS STEEL BODY

makes a good steam trap better . . . at no increase in cost to you. Means reduced maintenance for the trap that gets equipment hotter, sooner and keeps it hot! Over 600,000 Yarways already installed! Sold by distributors throughout the world.

YARNALL-WARING CO. 131 Mermaid Ave., Phila. 18, Pa.

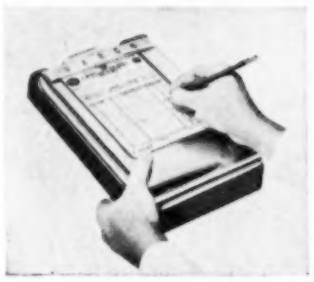
For more details circle NED-5598 on enclosed inquiry slip

HYDRAULIC DRUM FORKS
handle two steel drums easily

In addition to ordinary pallet fork operations these hydraulic drum forks can handle steel drums without pallets. Right-hand fork is moved laterally by double-acting hydraulic cylinder, while left fork is anchored in stationary position. Concave notches on inside edges of forks contact sides of drum below upper rolling rings. Made by **Towmotor Corp.**, 1219 E. 152nd St., Cleveland 10, O.

For more details circle NED-5599 on enclosed inquiry slip

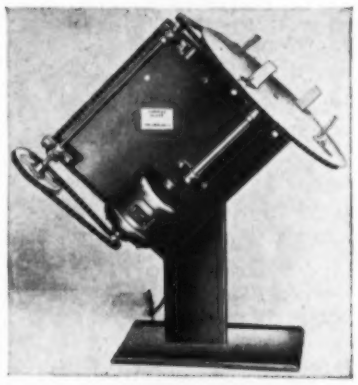
PORTABLE REGISTER
handles full-size business records



Weighing only 2½ lb, this portable autographic register holds 100 three-part business forms. Complete record protection and control is established by built-in Clip Tray for filing carbon copies. Quickly removed and replaced when filled, this system facilitates end-of-day accounting. Register employs steel moving parts, aluminum case with wrinkled gray enamel finish and stainless steel lid. It measures 13 x 8 x 3¼-in. Made by **Uarco Inc.**, 141 Jackson Blvd., Chicago, Ill.

For more details circle NED-5600 on enclosed inquiry slip

PORTABLE TUMBLER-MIXER
tilts through full 90-degree arc



Adjustable turntable clamps of tumbler-mixer permit odd-shaped as well as standard containers to be used. Wooden box, 5-gal pail, can, jug, stone ball mill, laboratory beaker and other containers can be held easily. Regular octagonal tumbling barrels of steel or nonmetallic materials can be furnished. Machine can be moved easily from job to job and tilted so that work is tumbled at best angle. Construction features include antifriction bearings, 1/6-hp motor and 19-in. turntable. Made by **Rampe Mfg. Co.**, 3029 Prospect Ave., Cleveland 15, O.

For more details circle NED-5601 on enclosed inquiry slip

New Answer to Faster Production

Index Table Now Offers Speedy, Automatic Feed For Many Types of Equipment

For fast, automatic accuracy, feed work to machines on Denison Indexing Tables. Now offered for use on *all types of production equipment* and backed by years of success on Denison Presses. A good example is the welding unit at right, built by Progressive Welder Co., of Detroit. Equipped with a Denison Indexing Table, it features automatic feeding of parts to welding guns, automatic squeeze, automatic welding, automatic hold, and automatic release—in positive sequence at controlled speeds. Each operation can be regulated individually. Easily combined with other equipment. Either 6 or 12 tooling or fixture stations can be used. Table interlocks positively with parent equipment, and its speed is regulative. Write for full details!

HydrOILic Pumping Unit Powers Indexing Table

Complete, compact pumping unit powers the Denison Index Table. Can be installed on machine assembly, or separately with connective piping. Several models and sizes.

DENISON HydrOILics

The DENISON Engineering Co.
1151 Dublin Rd., Columbus 16, Ohio

For more details circle NED-5602 on enclosed inquiry slip

When the Heat's on . . . R & M HOISTS DELIVER

Moving upwards of 350 tons of molten metal per day from furnace to flask, nine 2-ton R & M hoists boost production of a large foundry in Ironton. Although operating only 5 feet above the searing heat of tapped furnaces, these hoists require little maintenance. They're rugged enough for the toughest tasks. There's an R & M hoist or crane for your operation.

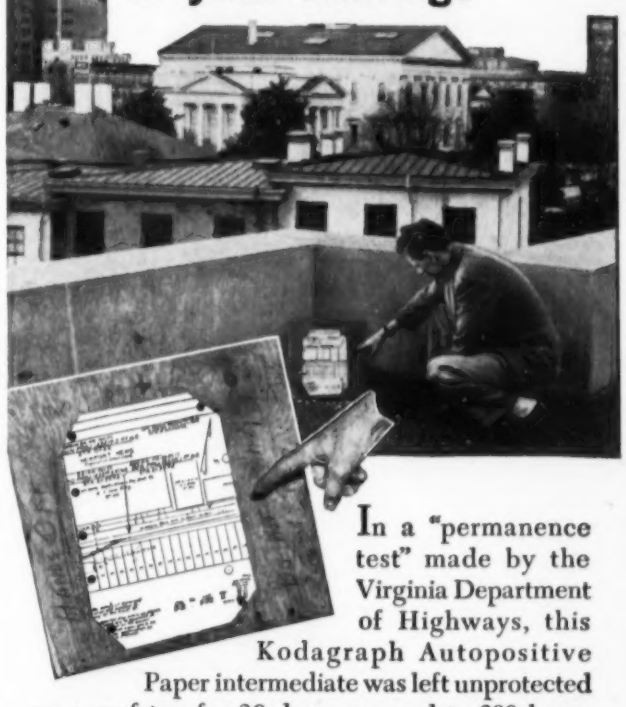
Capacities: ¼ to 25 tons. Write for free literature.

ROBBINS & MYERS, INC.
HOIST & CRANE DIVISION, SPRINGFIELD 99, OHIO

For more details circle NED-5603 on enclosed inquiry slip

You'll be interested in this test if you want

durable, low-cost intermediates of your drawings

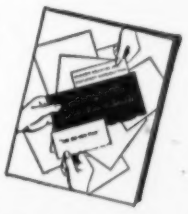


In a "permanence test" made by the Virginia Department of Highways, this Kodagraph Autopositive Paper intermediate was left unprotected on a roof top for 36 days—exposed to 200 hours of direct sunlight . . . and 6.88 inches of rain. *After all this abuse* the print was "good as new."

Proof, indeed, that "Autopositives" will stand up under less trying, normal conditions . . . will remain intact in the files . . . ready to produce blueprints or direct-process prints whenever needed.

Other advantages: Kodagraph Autopositive Paper produces positive photographic intermediates directly . . . without a negative step or darkroom handling—at surprisingly low cost. With it, you can also *protect* your valuable originals . . . *reclaim* your "unprintables". . . *simplify* print production.

A new free booklet gives full details on revolutionary Kodagraph Autopositive Paper, which you, or your local blueprinter, can process economically. Write today for a free copy.



Kodagraph Autopositive Paper

"THE BIG NEW PLUS" in Engineering Drawing Reproduction

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

For more details circle NED-5604 on enclosed inquiry slip

ACE PLASTIC BALLS

add quality and utility

to hundreds of products

Completely Seamless-
Precision Fabricated to order.

ACE Plastic Ball tops this popular UTIL1-TONG (Util-Tong, Inc., Glen Ellyn, Ill.)

- All sizes (⅛" x 1¾")
- Variety of plastic materials
- Wide variety of colors

Complete facilities for fabricating plastic parts for all industries. Estimates submitted promptly upon receipt of your blueprints or specifications.

Write today for Color Bulletin and Samples.

ACE PLASTIC COMPANY
Precision Plastic Fabricators and Extruders
91-28 Van Wyck Blvd. Jamaica 1, N. Y.

For more details circle NED-5607 on enclosed inquiry slip

MORE DRIVE ON THE JOB WITH THE RIGHT DRIVER FOR EACH JOB . . . . . .

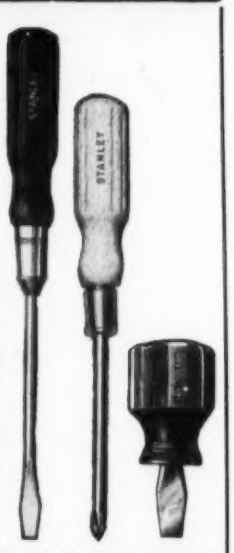
The right Stanley screw drivers for each job save valuable man-hours. Give a good man good tools . . . the right size, type and style for the different screws he's driving. See your industrial distributor. Stanley Tools, New Britain, Conn.

• • •

STANLEY No. 25 . . . blade lengths 3" up to 12"; deeply fluted hardwood handle; alloy steel blade tempered entire length. Bolster construction locks blade into handle and provides greater strength.

STANLEY No. 2702 . . . for Nos. 5 to 9 Phillips Recessed Head Screws, most commonly used sizes. Tempered blade secured in deeply fluted hardwood handle by ears swaged on shank. Other sizes available.

STANLEY No. 1009 . . . handy for tight places. Blade 1¾" long. Many other sizes in this popular construction. Unbreakable composition handle and special analysis alloy steel blade.



No. 25 No. 2702 No. 1009

THE TOOL BOX OF THE WORLD
STANLEY
Reg. U.S. Pat. Off.
HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

For more details circle NED-5608 on enclosed inquiry slip

Want to cut down on cleaning costs?

Send for this new book which shows and describes the latest DUAL-ACTION, Heavy-duty G-E Cleaners.

Get the facts. See for yourself HOW and WHY modern, high-vacuum, BLOWER-SUCTION G-E Machines can cut cleaning time and help save money. Read about the powerful new G-E Cleaner that weighs only 23½ lbs. Learn how G-E Cleaners are quickly adapted for WET pickup . . . the clean, fast, modern way to take up mop water . . . and suck up puddles when toilets and washbowls overflow.

MAIL TODAY

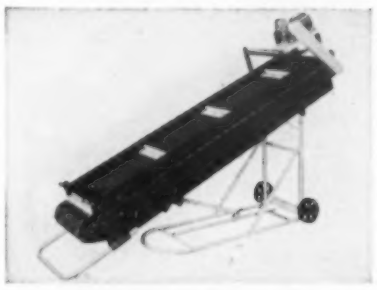
GENERAL ELECTRIC COMPANY, Dept. 22-2619
1285 Boston Ave., Bridgeport 2, Conn.
Certainly, I am interested in Saving Cleaning Dollars—let me have your Folder by return mail.

NAME.....
FIRM.....
ADDRESS.....
CITY..... ZONE..... STATE.....

GENERAL ELECTRIC

For more details circle NED-5609 on enclosed inquiry slip

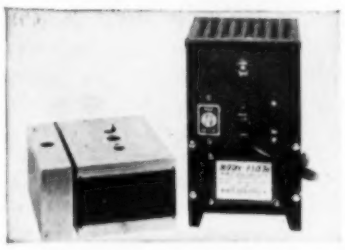
PORTABLE BELT CONVEYOR conveys either hot or cold forgings



Designed for handling forgings weighing up to 25 lb between operations in forge shops, Forge Press-Veyor power belt conveyor utilizes cleated wire mesh belt. It can be obtained in 8, 12 or 16-in. belt widths and 4, 6 and 8-ft lengths. Box channel bed is constructed of 12-gage welded steel to withstand continuous heavy loads, and steel cleats securely bolted to belt prevent materials from lodging under cleats. Unit is furnished with 6-in. diameter pulleys and sealed self-aligning ball bearings. Made by **Rapids-Standard Co.**, Dept. FPV, 342 Rapistan Bldg., Grand Rapids 2, Mich.

For more details circle NED-5610 on enclosed inquiry slip

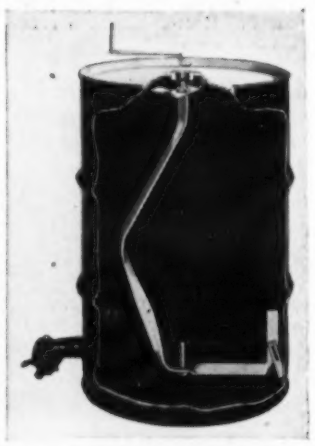
ELECTROMAGNETIC CHUCK holds horizontal and vertical setups



Designed as accessory for small size surface grinders, Body Flo Jr. 6-in. electromagnetic chuck and power supply unit magnetically holds itself to work table or can be bolted to T-slots. Chuck measures 6 x 4 x 2-15/16 in. with companion steel parallel of same length. Power supply unit has copper sulfide rectifier, convection cooling, Mag-Demag switch, input of 110-v ac and 4-amp 6-v dc output. Device is priced at $87.50. Made by **Magnetic Holding Devices, Inc.**, 2034N E. 22nd St., Cleveland 15, O.

For more details circle NED-5611 on enclosed inquiry slip

DRUM & BARREL AGITATOR can be hand or power operated

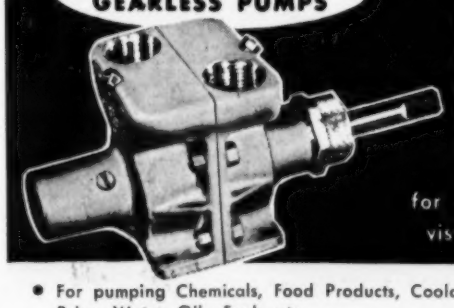


Driving spud on end of agitator bar of this American-Ingraham drum and barrel agitator makes it adaptable to either power or hand operation. Various planes of agitator bar are turned at angles to raise settled material from bottom of drum and mix contents thoroughly. Bar also provides sweeping arm and chime scraper that loosens material from bottom as well as from chime of drum. Agitator is securely fastened to both top and bottom of drum to prevent its becoming dislodged in shipment or handling. Made by **American Pulley Co.**, 4245 Wissahicken Ave., Philadelphia 29, Pa.

For more details circle NED-5612 on enclosed inquiry slip

WORTH INVESTIGATING

ECO GEARLESS PUMPS



AMERICA'S MOST VERSATILE MULTI-PURPOSE PUMP

for liquids and viscous fluids

- For pumping Chemicals, Food Products, Coolants, Beverages, Brine, Water, Oils, Fuels, etc.
- Quiet, smooth running. Bearings require no lubrication.
- Naval Bronze Forgings or Stainless Steel pump bodies last indefinitely, will not corrode.
- Capacity from 5 gph to 15 gpm. For use against pressures up to 150 lbs. per sq. in. Pumps in either direction.
- Four sizes: ¼", ⅜", ½", ¾". Run at speeds from 500 to 2400 rpm. Available in Motor Drive Unit. Also available with By-Pass.
- Ideally adapted for many types of original equipment.
- Dependable, trouble-free performance offers lowest cost per gallon of liquids moved.

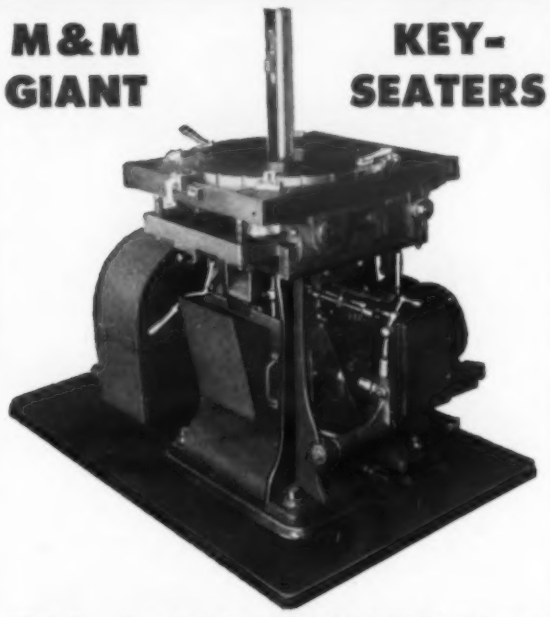
SEND FOR ECO PUMP BULLETIN J

Mfrs. of Gearless Pumps for Industrial, Farm, Home & Marine Use.

ECO ENGINEERING CO.
12 New York Avenue • Newark 1, N. J.

For more details circle NED-5613 on enclosed inquiry slip

M&M GIANT KEY-SEATERS



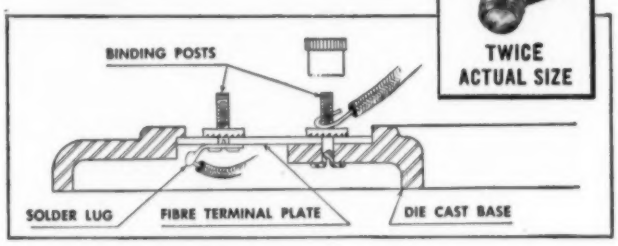
Giant Keyseaters, built in various sizes, speedily and accurately cut keyways or splines in pulleys, gears, and other machine parts. Special fixtures and cutters are available for those "hard-to-do" internal finishing operations which cannot be efficiently accomplished otherwise. Send us your problems.

MITTS & MERRILL
1000 SOUTH WATER STREET • SAGINAW, MICHIGAN

For more details circle NED-5614 on enclosed inquiry slip

ONE LITTLE PART *for a lot of big jobs*

TWICE ACTUAL SIZE



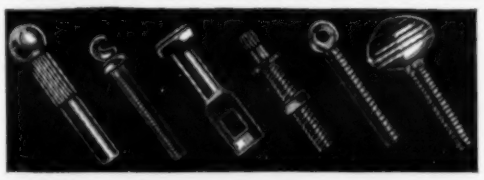
Lionel designed this non-turning, self-fastening binding post for making electrical connections to model railroad equipment, such as coal loaders. A multi-purpose fastener for a high quality product, it must be prefabricated with precision, speed and economy. Progressive provides the perfect facilities for specials such as this.

A combination tubular rivet and threaded post, the connector eliminates separate parts such as nuts and lock-washers, excludes expensive hand operations and permits multiple assembly. Made of headed stock, it curls without cracking. Serrations lock the post to keep it from turning. Tubular section holds the post to its base and may be used further to hold a soldering lug, etc. Drawing detail above shows the multiple functions performed by the fastener.

Special fasteners are our specialty. IF IT'S SPECIAL, see PROGRESSIVE.

WRITE FOR OUR CATALOG
IT MAY SAVE YOU MONEY

Other typical PROGRESSIVE *"Specials"*



THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.

SALES OFFICES: SAN FRANCISCO, LOS ANGELES, PORTLAND, DETROIT, PHILADELPHIA, CLEVELAND, SEATTLE, BOSTON, SYRACUSE, ST. LOUIS, CHICAGO.

For more details circle NED-5615 on enclosed inquiry slip

Ten basic sizes with capacities from 30 Mbh to 490 Mbh. Totally enclosed motors.

nyb

COMET UNIT HEATER

Horizontal Type

Ceiling suspension type with heavy duty, welded steel, fin-and-tube heating element. (Extra heavy non-ferrous coils also available.) Suitable for continuous heating service on steam pressures up to 150 pounds or more.

Bulletin 485

Vertical, Projection Type Also Available

For efficient heating from high-ceiling areas—for door heaters over small openings—or where the horizontal type Comet Heater is not applicable. Ten basic sizes; capacities from 27 to 332 Mbh.

Bulletin 484

IUHA HEAT WITH UNIT HEATERS

THE NEW YORK BLOWER COMPANY

GENERAL OFFICES • 32nd STREET & SHIELDS AVENUE • CHICAGO-16
FACTORIES AT LAPORTE, INDIANA AND CHICAGO, ILLINOIS

▲ For more details circle **NED-5616** on enclosed inquiry slip ▲

KNIVES STAY SHARP LONGER

Knives on the Steelweld Shear above were practically as sharp as new, after months of continuous operation, 8 hours a day, 6 days a week. Cut pieces were burrless, straight and true.

Long knife wear is the result of important features built into Steelweld Shears, such as solid one-piece frame, pivoted blade and easy knife adjustment.

For better, faster, easier shearing get the facts on Steelweld Shears. For all plate up to 18'-0" long or 1¼" thick.

STEELWELD Pivoted-Blade SHEARS CATALOG No. 2011

Send for free copy of catalog No. 2011.

THE CLEVELAND CRANE & ENGINEERING CO.
6622 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

▲ For more details circle **NED-5617** on enclosed inquiry slip ▲

STURTEVANT ROTARY FINE CRUSHERS

Crush or Granulate to Fine, Even Sizes without Excess Dust...

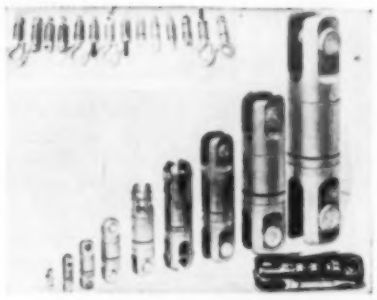
Cross section view illustrating the crushing action.

These rugged crushers speed output of fines, cut reduction costs. Desired fineness is quickly obtained by regulating hand wheel. "Open-door" accessibility permits fast, easy cleaning. They crush fine . . . crush fast and do not clog. Available in output capacities from 1 to 30 tons-per-hour. Write for catalog.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 24, MASS.

▲ For more details circle **NED-5618** on enclosed inquiry slip ▲

BALL BEARING CRANE SWIVELS
eliminate wire line twist and kink



Consisting of 15 different types of end connections and nine swivel capacities ranging from AA model rated at 250-lb to H model at 46,200-lb working load, these Miller ball bearing swivels have safety factor of 5 to 1. They turn freely under maximum stress removing kink and twist usually present when wire line is heavily loaded. This eliminates spinning of load and gives hoisting crane operator greater control. Applications include use in construction industry for lifting concrete buckets and demolition balls; single line hoisting in connection with traveling blocks; and with kelly bar on drilling jig. Made by **General Machine & Welding Works,** 1110 E. Second St., Pomona, Calif.

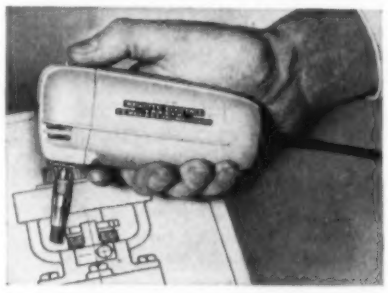
▲ For more details circle **NED-5619** on enclosed inquiry slip ▲

HAND KNURLING TOOL
handles 3/32 to ¾-in. diameters

Two knurls of Two-Way hand knurling tool revolve on stationary centers at back of work, and third knurl is adjusted by means of screw handle. Adjustable knurl is backed off so that tool can be placed over work; then it is screwed into work by turning handle. Tool can be operated in stationary position to make narrow band of knurling and embodies automatic feed feature so that when knurl is swiveled to slight angle, it travels along work. Replaceable knurl pins are available in four pitches for straight or diamond patterns. Made by **Wade Tool Co.,** 39 River St., Waltham, Mass.

▲ For more details circle **NED-5620** on enclosed inquiry slip ▲

ELECTRIC ERASING MACHINE
is 5-in. long and weighs only 17 oz



Efficient reduction gear design of Weilette electric erasing machine permits motor to run at 17,000 rpm while delivering necessary 2200-rpm eraser speed at chuck. It quickly erases pencil or ink without trace or smudge on hard or soft surfaces and permits full view of work. Quick acting on-off switch is conveniently placed for thumb operation, and balanced chuck with knurled collar permits use of various types of erasers. Made by **J. H. Weil & Co.,** Dept. K, 1315 Cherry St., Philadelphia 7, Pa.

▲ For more details circle **NED-5621** on enclosed inquiry slip ▲

CAN YOU AFFORD NOT TO GIVE YOUR WORKERS PROPER *Seating?*

A tired worker costs MUCH more than a GOOD CHAIR

***Royal's* 515 STOOLS WILL HELP KEEP YOUR WORKERS AT PEAK EFFICIENCY...**

Resulting in More Work Produced per Man Hour and Lower Actual Costs per Chair.

- STURDY MASONITE INSERT IMBEDDED IN SEAT PAN.
- LEG EXTENSION FOR EASY HEIGHT ADJUSTMENT.
- ADJUSTABLE BACKREST.
- OVEN BAKED GREY ENAMEL FINISH.

60 DAY *Free* TRIAL examine it... test it... use it without obligation

10 YEAR *Free* MAINTENANCE POLICY

ROYAL METAL MFG. CO.
175 NORTH MICHIGAN AVENUE
CHICAGO 1, ILLINOIS

▲ For more details circle **NED-5622** on enclosed inquiry slip ▲

▲ For more details circle **NED-5623** on enclosed inquiry slip ▲

WILL TEST ANY MATERIAL
Cloth
Wire
Brass
Glass
Steel
Wood
Rope
Rivets
Screws
Rubber
Springs
Plastics
Aluminum
Castings
Etc.
IN STANDARD OR ODD SHAPES

The Dillon Tester tests rounds, flats, special shapes. Dillon Dynamometers come in 7 different capacities, (0-250 lbs. to 0-10,000 lbs.) All easily, quickly interchangeable. Each is individually calibrated and checked—accuracy guaranteed. Supplied with one set gripping jaws. Hand operation or motorization optional.

W. C. DILLON & CO., INC.
PRECISION INSTRUMENTS FOR PRECISION TESTING
Complete catalog sent on request.

IT'S FOR YOU . . . FREE TENSILE STRENGTH COMPUTER that tells in seconds the tension at which round or rectangular specimens will break. Complete information on Dillon multi-low range Universal Tester sent along, too.

W. C. DILLON & CO., INC.
5410-NE W. Harrison St., Chicago 44, Illinois

Please send me at once, your FREE Tensile Strength Computer and Complete Information on the Dillon Tester.

Company Name_____
Individual_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle **NED-5624** on enclosed inquiry slip ▲

New! **FAFNIR**

Spherical Roller Bearing Pillow Blocks

Two-piece split design housing: High-grade stress relieved cast iron, oil or grease lubrication, held or free bearing mountings, adaptable for oil or water cooling, equipped with either felt seal or frictionless triple labyrinth seals, housings with closed ends when required.

Two types — full range of sizes: Adapter type mountings for shaft diameters from 1 7/16" to 7 15/16". Straight bore mounting for shaft diameters from 1 15/16" to 8 5/8".

Torrington Self-Aligning Spherical Roller Bearings: Completely self-aligning to compensate for any practical angular displacement of shaft. High radial and two-direction thrust capacity for both types of load.

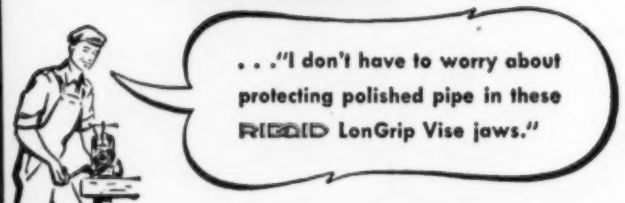
Write for literature. The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR BALL AND ROLLER BEARING PILLOW BLOCKS

For more details circle NED-5625 on enclosed inquiry slip

BENCH YOKE VISE

that's a real Time Saver



LonGrip Jaws protect polished pipe in RIDGID vises

● You get years of trouble-free service with this more-for-your-money RIDGID Bench Yoke Vise. You like its easier-work features — integral pipe rest, handy bender that won't flatten pipe and LonGrip jaws that protect polished pipe. Special malleable frame and heat-treated tool-steel jaws for maximum wear. Made in 8 sizes, for pipe to 6." RIDGID bench, post, stand and Tristand pipe vises, yoke and chain types, all offer you real work-saver advantages. Buy them at your Supply House.

RIDGID
WORK-SAVER PIPE TOOLS
THE RIDGE TOOL CO. • ELYRIA, OHIO

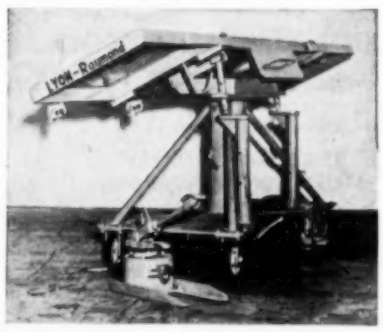
For more details circle NED-5626 on enclosed inquiry slip

AIR LINE LUBRICATOR for tools using 10 to 60 cfm

Lubrication of one or more tools is accomplished automatically with this air line lubricator where minimum of 10 cfm is used by one tool and maximum of 60 cfm by all tools taking air through unit. Transparent Plexene bowl that holds 6 oz of light oil provides oil feed through porous bronze wick, and when used with 35-cfm tool, bowl holds enough oil for 8 to 10 weeks' service under normal conditions. Quantity of oil dispensed is dependent upon amount of air passing wick. Under normal conditions, pressure drop through device will not exceed 1 psi. Made by **Keller Tool Co.,** Dept. N, Grand Haven, Mich.

For more details circle NED-5627 on enclosed inquiry slip

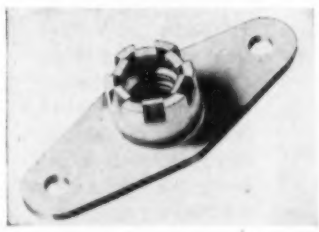
SHEET FEEDING TABLES available with self-tilting top



Tilting top arrangement of this hydraulic sheet feeding table for use with inclined bed presses is available as optional feature on 2000, 4000 and 6000-lb capacity models. Sheets are loaded on top when it is in horizontal position. By manipulation of pump and table supports, top is hydraulically tilted to desired angle. When proper degree of tilt has been fixed, table can be elevated or lowered as required to keep stock at correct height for feeding to press. Adjustable stops are provided on one side of table to keep entire pile of sheets even for accurate feeding. Made by **LYON-Raymond Corp.,** 4173 Madison St., Greene, N. Y.

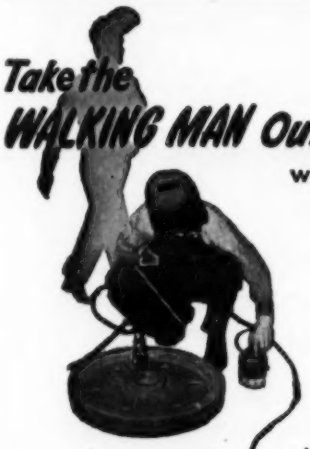
For more details circle NED-5628 on enclosed inquiry slip

SELF-LOCKING NUT in 8-32, 10-32 and 1/4-in. sizes



Employing Hex-Lok principle, Plate Lok self-locking nut is essentially two nuts in one. Top locking section is formed by depressing six threaded flanges inward and downward so that they exert positive pressure against body of bolt without distorting or harming bolt threads. Flanges are held by tension in this out-of-phase condition and return to depressed position when bolt is removed. All-metal unit is unaffected by oil, gas, water or corrosives. It resists all types of vibration, can be set to specific torque value and has high reusability factor. Nut can be used at temperatures from below zero to 550° F. Made by **Boots Aircraft Nut Corp.,** Dept. NED, John St., Stamford, Conn.

For more details circle NED-5629 on enclosed inquiry slip



Take the WALKING MAN Out of Your Weld Shop

with Built-in Remote Control

This exclusive feature of the new P&H Dial-lectric AC Arc Welder saves welding time and money...

The "walking man" has his place — but not in the shop — there he costs you money. Avoid this cost by using the new P&H AC Arc Welder.

Its Dial-lectric design makes possible a new built-in remote-control feature, because a three-quarter turn of one radio-like knob covers the entire welding range.

The simplicity is such that the Dial-lectric unit can be removed with a twist and used any distance from the welder — an extension cord is all that's required.

Your operator has full arc control at the work. He wastes no time or energy walking back and forth to the machine to make current adjustments. He uses the right heat. The work is done in a shorter time, at less cost.

Sizes range to 625 amps. See your P&H representative or distributor for all the money-saving facts. Write for bulletin W-72-1.

P&H ARC WELDERS 4537 W. National Ave., Milwaukee 14, Wis.
HARNISCHFEGER

1947-A

For more details circle NED-5630 on enclosed inquiry slip

EVERY PLANT CAN USE ADJUSTABLE STEEL HORSES

They are the "work horses" in every plant or shop . . . more than pay for themselves, and are never idle because of the many uses their ready adjustability will easily serve:

SPOT WELDING TABLES	SCAFFOLDING
FABRICATION SUPPORTS	CONVEYOR SUPPORTS
LAYOUT WORK	MAINTENANCE WORK
BENCHES	And many other uses

MODELS FOR HEAVY OR LIGHT WORK

Standard length 36". Low Height 24"; Extended Height 42". Adjustable at 1½" intervals. Held in position by steel lock pins. All units portable. Painted one coat chrome yellow.

IMMEDIATE DELIVERY
Write for full information

Bruner HANDLING EQUIPMENT

BRUMMELER STEEL PRODUCTS CORPORATION
1411 Ionia Ave. S. W., Grand Rapids, Michigan

For more details circle NED-5631 on enclosed inquiry slip

NEW MEAD INDUSTRIAL AIR POWER CATALOG Ready!

Full of Suggestions for **FASTER, CHEAPER PRODUCTION!**

Illustrated, describes Air Cylinders, Valves air operated Presses, Vises, Chucks, Hammers, Drill Press Feeds, Work Feeders, Timers, semiautomatic combinations, etc.

Write for Complete Catalog!

MEAD SPECIALTIES COMPANY

4114 NO. KNOX AVE., DEPT. NA-80, CHICAGO 41, ILL.

For more details circle NED-5632 on enclosed inquiry slip

ROCKWOOD BALL VALVES HELP INCREASE STEEL MAKING CAPACITY

No place for leaky valves on this high pressure oxygen line where careful control of the flow of oxygen to the open hearth furnaces is necessary at all times.

The Rockwood Ball Valve was selected by this large steel corporation primarily for its quick turn on and off action and leak proof service. These outstanding features of the Rockwood Valve enables furnace operator to properly control the oxygen which is used for the melting process that helps increase furnace capacity.

Rockwood Ball Valves stay on the job indefinitely without leaks or maintenance. Industry after industry has found Rockwood Valves reliable — in oil refineries, food, paper, chemical and rubber plants, etc.

You can have Rockwood Valves in bronze in all pipe sizes from ½" to 2" for 300 p.s.i. working pressure.

1. Full round open area no turbulence in fluid stream
2. Leak proof after continued use
3. Quarter turn (90°) opening and closing valve

Write for Bulletin V-4. Distributors in all Principal Cities

ROCKWOOD SPRINKLER CO
44 HARLOW STREET WORCESTER 5, MASS

For more details circle NED-5633 on enclosed inquiry slip

This sensational new development has no counterpart in the field of measuring devices! The new Brown & Sharpe No. 245 Indicating Bench Micrometer not only *measures* fine small parts from 0 to ½" by ten-thousandths, but can be used as a quick, accurate *comparator*. Large dial indicator gives instant direct readings of variations, in ten-thousandths, from any desired setting. For full details, write for new illustrated Bulletin. Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

We urge buying through the Distributor

BROWN & SHARPE BS

For more details circle NED-5634 on enclosed inquiry slip

NEW SIZE 4 "RA" MAGNETIC STARTERS

ARROW AH HART

½ CONVENTIONAL SIZE

SMALLEST SIZE 4 ON THE MARKET—

Patented "RA" (Right Angle) Balanced mechanism cuts space in half. HIGH ARC RESISTANCE — Long arc path; silicon-chute enclosed contacts, shaped to force arc to extinction. EASE OF WIRING AND SERVICING — Straight through wiring, plenty of working space in the box; terminals front-wired; line and loads connect at opposite ends. 4-PILLAR ALIGNMENT — Assures straight line action, greater stability. FOR ITS SPACE-SAVING FEATURES, FOR ITS WORK-SAVING FEATURES, THE NEW AH SIZE 4 "RA" MAGNETIC STARTER IS THE SENSIBLE ONE TO SPECIFY AND BUY.

Write today for literature on Arrow-Hart Type "RA" Magnetic Starters, available in local and remote control or selector switch types—all sizes.

CONTROLS and APPARATUS FOR *Outstanding* PERFORMANCE

ARROW AH HART

6008 HAWTHORN STREET HARTFORD 6, CONN., U.S.A.

ARROW-HART

THE ARROW-HART & HEGEMAN ELECTRIC COMPANY HARTFORD 6, CONN. U. S. A.

BRANCHES IN: Boston, Chicago, Cleveland, Cincinnati, Dallas, Denver, Detroit, Los Angeles, New York, Philadelphia, San Francisco, Syracuse.

IN CANADA: ARROW-HART & HEGEMAN (Canada) Ltd., Mt. Dennis, Toronto

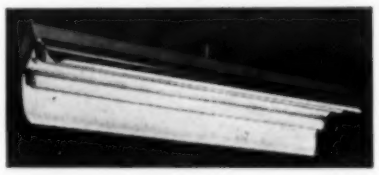
For more details circle NED-5635 on enclosed inquiry slip

AUTOMATIC CUTTING MACHINE for wheels, pinions and segments

By utilizing one cutter for roughing and one for finishing, No. 118 type 11a wheel, pinion and segment cutting machine assures close tolerances and fine surface finish in production of parts ranging from 0.04 to 2-in. diameter. Work is held to 0.00005 to 0.0001-in., depending upon material and requirements of job. Maximum module is 1.0 in steel and 1.25 in brass, and maximum tooth length is 1.58 in. Machine generates gears and pinions of 6 to 200 straight teeth in one cut and of 6 to 80 teeth in two cuts. Automatic feed magazine is easily set up or removed for hand feeding, and all controls and adjustments are readily accessible. Distributed by **Hauser Machine Tool Corp.**, Dept. 5N, 30 Park Ave., Manhasset, N. Y.

For more details circle NED-5636 on enclosed inquiry slip

INDUSTRIAL LIGHTING FIXTURE for chain, stem or rod suspension



Using two 40-w T-12 fluorescent lamps, model No. 2099 low cost industrial lighting unit has 13-in. wide reflector and 5-in. lamp spacing. Knockouts at either end of channel permit mounting and wiring units end-to-end in continuous rows. Reflector is finished in hard glossy white baked enamel for maximum light output. List price is $11.50 packed four to carton; $12.10 packed individually. Made by **Mitchell Mfg. Co.**, 2525 Clybourn Ave., Dept. N-2, Chicago 14, Ill.

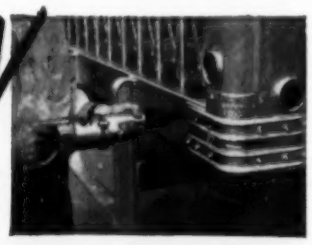
For more details circle NED-5637 on enclosed inquiry slip

PRECISION THERMOSTAT temperature range is 300 to 700° F

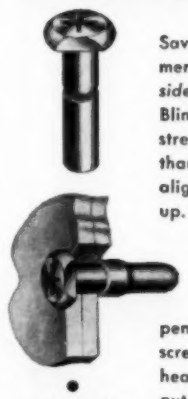
Basic type R electric thermostat consists of adjustable double-pole snap-action switch for various temperature settings. It is actuated by bellows, connected by capillary tube to heat-sensitive bulb. Bellows housing, tube and bulb are liquid filled. By varying amount and type of liquid, any desired temperature range within limits can be obtained. Bulb is placed at point where temperature is to be controlled; switch mechanism and dial can be located remotely wherever convenient. Thermostat can be utilized for automatically controlling temperature of any electrically-heated liquid, solid or gas medium. In addition, it serves as on-off switch. Made by **Wilcolator Co.**, 1002 Elizabeth Ave., Elizabeth, N. J.

For more details circle NED-5638 on enclosed inquiry slip

New BLIND BOLTS



for heavy duty blind fastening



Save time handling heavy sheeting and structural members . . . you can *fasten* heavy work from *one side of the job* with Cherry Rivet Company's line of Blind Bolts. Blind Bolts have the shear and tension strength you need . . . and they install much faster than nuts and bolts. After two or three Blind Bolts align your job, it's only a matter of seconds to finish up. Write for complete literature today.

The Blind Bolt is a three-piece assembly of a hollow rivet, an inner screw and a threaded nut fitted to the screw. To install . . . an inexpensive Cherry adapter tip is fitted to an automatic screw driver. The adapter tip fits the recessed screw head. Upon operation of the tool, the expanding nut is drawn over the rivet shank until it butts against the blind side of the job.

write today for new bulletin

CHERRY RIVET COMPANY

231 Winston St., Los Angeles 13, Calif.
Address Department H-113

For more details circle NED-5639 on enclosed inquiry slip

HAPMAN TUBULAR, CHAIN OR CABLE CONVEYORS

FOR FLOWABLE MATERIALS

Here, the problem was how to make completely automatic, the removal of dry cast iron chips from the base of 2 profile milling machines in the International Harvester truck engine plant at Indianapolis. Hapman Conveyors job-engineered the installation shown; it operates (1) in 2 planes and 2 directions, (2) without transfer points, (3) requires minimum clearances and (4) few structural supports.

These are but 4 of the 45 difficult conditions now being met successfully by Hapman job-engineered Conveyors. Send for the Hapman catalog showing them in detail and listing the many types of flowable materials handled.

National Sales Offices in Thomas' and MacRae's

HAPMAN CONVEYORS Div. HAPMAN-DUTTON COMPANY
19209-F DAVISON • DETROIT 23, MICHIGAN

For more details circle NED-5640 on enclosed inquiry slip

ALL THESE CARTONS CLOSED IN LESS THAN 1 MINUTE

● If variable carton sizes are used in your shipping, you are losing money every day you do not have an International Retractable Anvil Staple Machine—saves time, automatically adjusts for size variations; one operator closes 400 cartons per hour—saves space, cartons remain flat until ready for use—saves damage claims, meets Consolidated Freight and Postal Regulations.

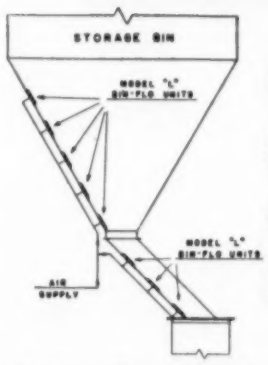
Your inquiry will result in one of our distributors showing you exactly how one of our more than thirty models will save you money and give you a neater and stronger carton closure.

INTERNATIONAL STAPLE & MACHINE CO.
HAVERTOWN 2, PENNSYLVANIA

EST. 1938

For more details circle NED-5641 on enclosed inquiry slip

BIN-FLO



Provides STEADY FLOW of Bulk Materials

New aerating device provides uniform steady flow of most dry finely-ground materials from bins, hoppers, chutes, and silos.

BIN-FLO units are located at points of restricted flow. Low-pressure air supply may be controlled by BIN-DICATORS.

THE BIN-DICATOR COMPANY
13946 Kercheval Avenue Detroit 15, Michigan

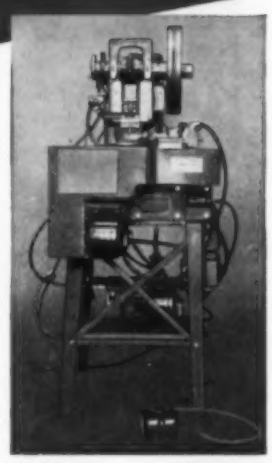
Please send new 20-page catalog giving complete information and specifications on BIN-DICATORS. Also please send information on BIN-FLO Aerating Units.

Name_____
Address_____
City_____ State_____

D-8

For more details circle NED-5642 on enclosed inquiry slip

CUT COSTS of feeding punch press with GAST vacuum pumps



PROBLEM: Designer needs instant vacuum source for high-speed automatic punch press feeder.

SOLUTION: GAST Rotary Integral-Motor Vacuum Pumps (Model 0320) specified as original equipment on this unit. Vacuum picks up piece from indexing table and feeds it into die.

RESULT: Production potential of this model press greatly increased—users cut costs tremendously with automatic feeding. Safety is improved—operator loads indexing table outside danger zone. Uniform feeding protects dies, lengthens die life.

Alert product engineers are finding scores of other applications where GAST Air Pumps and Air Motors provide unique advantages as original equipment on other machines. Investigate the possibilities of solving *your* problem with *air*.

WRITE FOR "APPLICATION IDEAS" BOOKLET—ALSO GAST CATALOG

SEE OUR CATALOG IN SWEET'S FILE for PRODUCT DESIGNERS

"AIR MAY BE YOUR ANSWER!"

GAST ROTARY — AIR MOTORS (TO ONE H.P.) · COMPRESSORS (TO 30 LBS.) · VACUUM PUMPS (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

▲ For more details circle **NED-5645** on enclosed inquiry slip ▲

B.F. Goodrich

TW TIRE AND WHEEL ANALYSIS PLAN cuts tire & wheel costs by as much as 50%

Studies prove savings can be made in 2 out of 3 cases. The TW Analysis (at no obligation to you whatsoever) determines correct tire type, size, correct tread design, correct tread rubber compound . . . applies all factors to your specific job.

The BFG Analysis expert will make his recommendation—including suggestions on proper maintenance. He is completely *impartial*—has no "axe to grind" for any "type" of tire—B. F. Goodrich makes and sells ALL types in ALL sizes.

No problem is too small, or too large, for the TW Analysis man: Fill out the coupon below and ask him in—even though your problems are little ones—he'll make a complete study for you.

HEAT a factor in your plant? BFG "Oil-Proof" compound is highly heat-resistant. B. F. Goodrich makes 14 types of tires with 6 different tread compounds. Tires include pneumatics, *all types of solids* and semi-pneumatics.

Special tires for special needs. The popular *DeLuxe Cushion*—ideal where cushioning is a must—wears longer than other cushion types, has no "inner cushion" of soft rubber to wear away rapidly.

The B. F. Goodrich Co.
Department TW-60
Akron, Ohio
Please give me additional information on your new Tire and Wheel Analysis plan.
Name_____
Title_____
Company_____
City_____ State_____

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

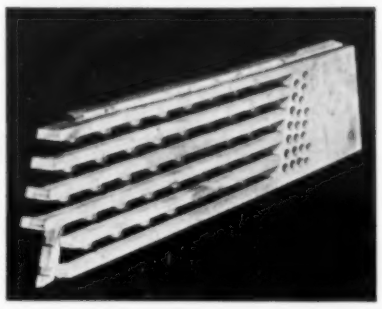
▲ For more details circle **NED-5646** on enclosed inquiry slip ▲

HYDRAULIC PRESSURE PUMPS deliver 1 gpm at 1000-psi pressure

Intended for intermittent service, Hy-Lo-Jack oil hydraulic pressure units require less than 1 hp. Basic model is available in six types, including electric, with either foot or flange mounting. Rotation can be clockwise or counterclockwise as required. Design features include built-in relief valve and strainer as well as full needle bearing construction for balanced performance. Made by **Monarch Road Machinery Co.**, Hydraulic Div., 331 Front Ave. N. W., Grand Rapids 4, Mich.

▲ For more details circle **NED-5647** on enclosed inquiry slip ▲

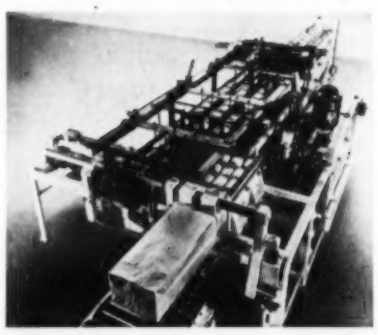
SUCTION BOX COVER of end-grain-slotted hard maple



Developed for use with Fourdrinier paper machine, Lo Vac suction box cover can be adapted for use with other industrial equipment. Built of winter-cut hard maple, cover employs cross members to preserve strength. It has smooth surface and large open area which reduces vacuum required. When cover is used with paper machine, vacuum is distributed uniformly across sheet to provide good fiber formation and strength with few pin holes. Made by **Appleton Wood Products Co.**, 1520 W. Second St., Appleton, Wis.

▲ For more details circle **NED-5648** on enclosed inquiry slip ▲

COMPRESSION PACKING MACHINE can pack up to 180 units per minute



When automatic compression packer cycles at top speed of 15 shipping containers per minute, production of two or three packing machines can be fed into it directly from packing lines. It packages consumer units of either bags or boxes in either baler bags or corrugated boxes. With only slight mechanical adjustment of machine, packages weighing from 1 to 25 lb can be handled. Interchangeable duckbills make it possible to package rectilinear cartons or round cornered bags. Made by **Union Bag & Paper Corp.**, Dept. 3433, 233 Broadway, New York 7, N. Y.

▲ For more details circle **NED-5649** on enclosed inquiry slip ▲

UNITED Electric Controls Company

Standard & Special Thermostats & Pressure Switches

TYPE W THERMOSTAT

Provides Automatic Control For Ovens, Hot Plates or Liquid Baths

The Type W Thermostat is an adjustable short-range control developed to automatically maintain critical temperatures within close limits. It is especially suited for controlling ovens, incubators, liquid baths, hot plate presses, cold cabinets, as well as food and drink vending machines.

The Type W thermostat is a remote bulb-type employing a highly sensitive, solidly liquid-filled bulb and hydraulically-formed brass bellows to actuate a positive snap action switch. It can be furnished calibrated for any range, depending on the thermal assembly used, between the limits —120° F. to 600° F. and with fixed, uniform differentials to suit the application. Electric ratings on the standard model are 10 amp 125 V AC and 5 amp 250 V AC. Special models up to 25 amp 125 V AC are available. Write for bulletin containing full details.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

▲ For more details circle **NED-5650** on enclosed inquiry slip ▲

U·S·S MULTIGRIP FLOOR PLATE

comfortable to work on, comfortable to walk on, Safe . . . wet or dry!

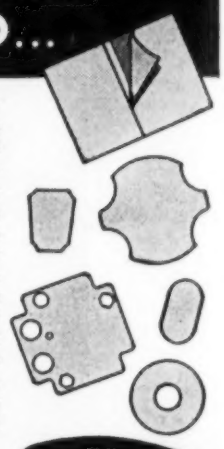
Carnegie-Illinois Steel Corporation, Pittsburgh
Columbia Steel Company, San Francisco
Tennessee Coal, Iron & Railroad Company, Birmingham
United States Steel Supply Company, Warehouse Distributors, Coast-to-Coast
United States Steel Export Company, New York

USS MULTIGRIP FLOOR PLATE
UNITED STATES STEEL

▲ For more details circle **NED-5651** on enclosed inquiry slip ▲

NEW! BRADY MASKS

Die-Cut to Sizes and Shapes You NEED...



Self-adhesive **BRADY MASKS** will save you time and dollars in spray-painting, tumbling and sand-blasting operations. ***Die-cut to the exact shape and size you require,*** form-fitting **BRADY MASKS** *protect* name plates, machined parts, plated and polished sections, holes, threads, and other areas from paint, plating solutions and damage. They eliminate costly hand cutting, use of stop-off materials, and expensive metal shields. Made from "Scotch" Brand Masking Tapes, they are fast to apply and fast to remove after use. Low in cost, **BRADY MASKS** will bring immediate worthwhile savings to your plant. Circles, squares and rectangles **stocked in many sizes.** Write today for useful literature and **FREE SAMPLES.**

BRADY-MILWAUKEE CO.
(Div. of W. H. Brady Co., Chippewa Falls, Wis.)
212 W. Washington St., Milwaukee 4, Wis.

FREE SAMPLES

▲ For more details circle **NED-5652** on enclosed inquiry slip ▲

for easier MATERIALS HANDLING

STRONG!
TOUGH !!
LIGHT !!!

TRUCKS & TOTE BOXES

You can't get more wear or longer life from any other type of tote box or truck, than you get *built right in* these lightweight, vulcanized and reinforced

BAL PLASTIC FIBRE PRODUCTS

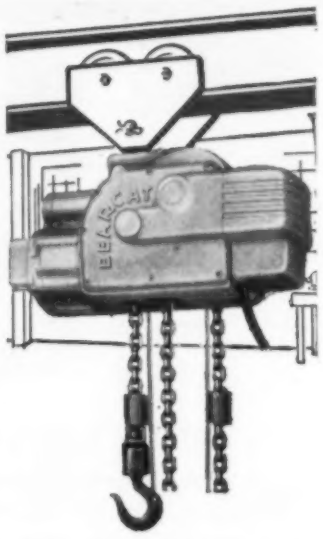
So light that girls can handle them loaded with lightweight parts; sturdy enough to carry heavy parts and defy constant usage and drudgery. Double-strength corners; steel "elbows" to ward off damage. Hard, smooth surfaces with no rough edges. Made in all sizes. Catalog shows many types of trucks; tote boxes for many industrial needs. *Send for details!*

BAL BUILT WITH A CONSCIENCE

WILLIAM BAL CORPORATION
11 Johnson Street, Newark 5, N. J.

▲ For more details circle **NED-5653** on enclosed inquiry slip ▲

LIFTS 22 TIMES ITS OWN WEIGHT



HERE is simplified engineering in its most functional design; this ¾ H.P. Bearcat Electric Hoist of 2000 pounds capacity weighs only 93 pounds.

Its easy maneuverability speeds materials handling; and automatic holding brake and controller operated snubbing brake eliminate the risk of injury from a slipping load.

Spur gears are interchangeable at a cost of only $9.00 and fifteen minutes time . . . permit a range of lifting speeds from 12 to 50 FPM. Main housing and covers feature a lightweight, high tensile aluminum alloy.

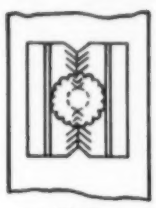
Bearcat Electric Hoists are available in capacities from 170 to 2000 pounds, for single or polyphase service. Write for Bulletin P-53.

HOIST MANUFACTURERS SINCE 1876

THE HARRINGTON COMPANY
17TH AND CALLOWHILL STREETS
PHILADELPHIA 30, PA.

For more details circle NED-5654 on enclosed inquiry slip

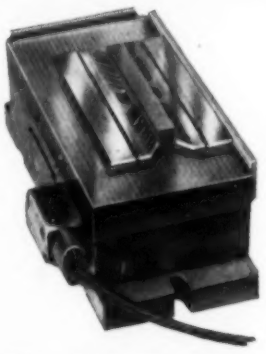
HERE'S HOW YOU CAN HOLD NON-MAGNETIC MATERIALS ON YOUR CHUCK



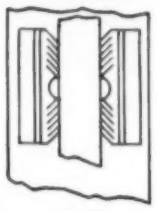
GEARS

IRREGULAR

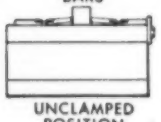
Piece is placed on magnetic surface of chuck between Magna Vise* clamps. When chuck is energized, clamps are drawn down forcibly thus holding piece securely in place on face of chuck.



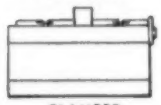
You can get more use than ever before from your magnetic chucks — *with Magna-Vise!* Holds any rigid non-magnetic material firmly in place — permits you to take full advantage of magnetic chucking for brass, aluminum, copper, fibre, plastics, etc. — cuts set-up time, cuts costs.



BARS



UNCLAMPED POSITION



CLAMPED POSITION

Do you know about the extra holding power of Magna Lock Chucks? It will pay you to get the facts — today.

Magna-Vise ★ *Patented

Write for full details today — Dept. ND-80

Hanchett MAGNA-LOCK CORPORATION
Magnetic Chucks and Devices
Magna-Lock
BIG RAPIDS • MICHIGAN, U. S. A.

For more details circle NED-5655 on enclosed inquiry slip

You Don't Have To Be A SCIENTIST!

Anyone can operate the G-R STROBOTAC with a few brief instructions. They are this simple:

1 Plug the line cord into any 110-volt 60-cycle line.

2 Set the speed control selector switch at either LOW or HIGH.

3 Turn the control knob very slowly, pointing the flashing beam at the object being viewed. Suddenly the machine or part will appear to slow down. A further very slight turn of the knob and the object will appear to be stationary.

4 On the illuminated speed scale, read the actual speed of the object over any range from 600 to 14,400 rpm. Simple calculation extends this range to 100,000 rpm.

That's all there is to it. The price? *Only* **$125.00**, ready to use.

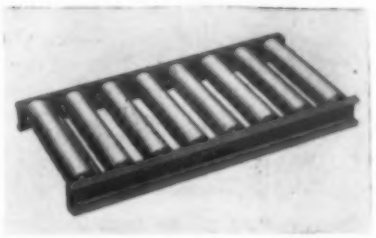
We would like to tell you how the STROBOTAC can help you in design, engineering, maintenance and sales.

Write for "EYES FOR INDUSTRY"

GENERAL RADIO CO.
Cambridge 39, Massachusetts
NEW YORK CHICAGO LOS ANGELES

For more details circle NED-5656 on enclosed inquiry slip

UTILITY ROLLER CONVEYOR
straight or curved sections offered



Ball-bearing wheels are utilized as end bearings in rollers of this utility conveyor. They are pressed into each end of 2-in. diameter rollers and are supported by ¼-in. cold-rolled steel shafts. Welded steel side frames are 2 x 1 x ⅛-in. channel. Conveyor can be furnished in 5 and 10-ft straight sections and 45 and 90-degree curves. Latter have 34-in. inside radius. Available widths are 12 and 18 in. with rollers on 3, 6, 9 or 12-in. centers. Made by **Sage Equipment Co.**, 28 Essex St., Buffalo 13, N. Y.

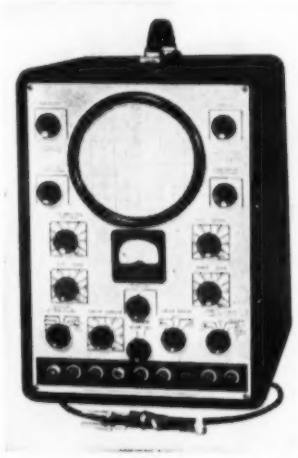
For more details circle NED-5657 on enclosed inquiry slip

WIRE TERMINAL CRIMPER
air tool usable on No. 6 to 1/0 wire

Air-operated AMC terminal crimping tool is supported from above by suspension loop for ease of use. Double sets of handles and triggers provide versatility of operation. Detachable heads are supplied for either conventional side or stub position crimping. Tool operates from standard 85-psi shop air outlets and is recommended for use in car building and industrial plants. Made by **Aircraft-Marine Products Inc.**, 1573 N. Front St., Harrisburg, Pa.

For more details circle NED-5658 on enclosed inquiry slip

OSCILLOSCOPE
has high vertical sensitivity

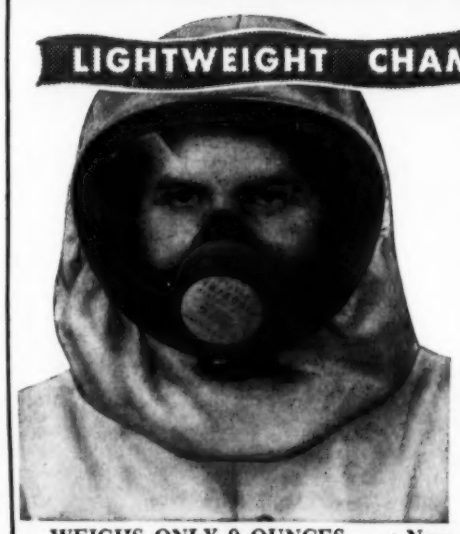


Suitable for television and general usage, 5-in. model No. 3440 oscilloscope features pattern reversing switch, calibrated meter for peak-to-peak voltage measurements and vertical sensitivity of 0.009 rms volts per inch. Built-in device eliminates double trace in TV alignment by simply flipping switch that permits sync control to 0. Demodulator probe is available for signal tracing, and instrument can be used over frequency range from 20 to over 1 million cycles. Conventional return trace eliminator, telescoping light shield and linear sweep voltages up to 60 kilocycles are standard. Made by **Triplett Electrical Instrument Co.**, 10 Harmon Rd., Bluffton, O.

For more details circle NED-5659 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

LIGHTWEIGHT CHAMPION



FULL VISION DUST AND SPRAY HOOD

WEIGHS ONLY 9 OUNCES . . . New design window assembly allows full, unobstructed vision in all directions. Does not interfere with the wearing of correction glasses. Heavy gauge plastic window provides impact resistance. Quickly replaced, when necessary, without use of tools.

Write for Bulletin L-80

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-5660 on enclosed inquiry slip

New GENERAL FILTER
for Hydraulic and Lubricating Oils

NO CARTRIDGES TO REPLACE

There are no expensive cartridges to throw away or stock. Entire unit is cleanable. First cost is only cost.

EASY TO CLEAN

Just remove one nut and all spacers and screens slide off. Wash in suitable solvent and replace. It's as simple as that.

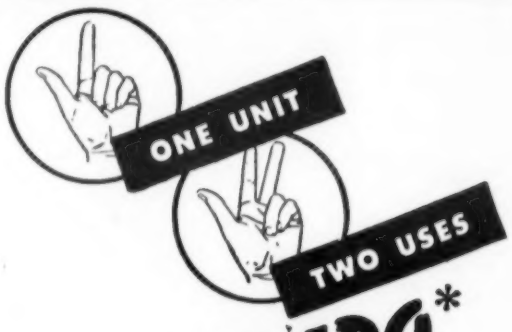
FILTRATION TO SUIT EVERY APPLICATION

Write! *for prices and specifications. Describe your application.*

This Model 1300 GENERAL FILTER can be made to filter solids from .040 inch to 5 microns by varying the mesh of the filtering screens. Comes in two standard lengths, 8 inches and 4 inches, but can be made any length to provide capacity between 5 and 50 gallons per minute.

GENERAL FILTERS, Inc.
12890 WESTWOOD — DETROIT 23, MICH.

For more details circle NED-5661 on enclosed inquiry slip



TORNADO* Pac-Vac vacuum cleaner and High-Velocity portable blower

Cuts plant cleaning costs to a fraction of what you now spend because this compact, powerful, dual-purpose cleaning machine can be used in so many places where larger equipment is ineffective and time-consuming. Permits maintenance men to do a better job in less time.

PAC-VAC cleaner has such strong, steady suction that one stroke over the surface removes all dust, lint, dirt, abrasive grit and grime. Cleans thoroughly the first time over. Lightly carried over the shoulder, it permits flexible, maneuverable operation on bare and carpeted floors, overhead pipes and equipment, in congested plant and office areas and all hard-to-reach places. Saves cleaning time . . . does a better job.

HIGH-VELOCITY Blower shoots a powerful concentrated stream of clean dry air moving at 262 M.P.H. to blow abrasive dirt and grit from interior of motors and machinery, from gears, shafts, pulleys and similar equipment. Keeps machinery smooth-running at full operating power and helps eliminate friction and fire hazards due to dust accumulations. Reduces breakdowns and work stoppages. Absolutely safe for the most sensitive, intricate mechanisms.

Conversion from cleaner to blower accomplished in just 8 seconds. Simply detach bag, strap and hose from cleaner; attach nozzle at air outlet for blower.

Easily handled and directed. A favorite with maintenance men. Underwriter's Approved.

Bulletin 579 contains complete information. ASK FOR IT.

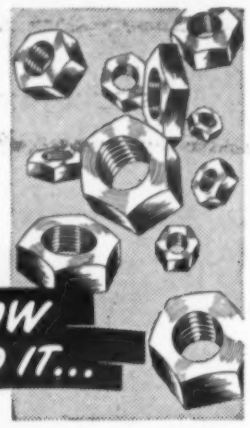
*Trade Mark Reg. U. S. Pat. Off.

BREUER ELECTRIC MFG. CO.
5098 Ravenswood Ave.
Chicago 40
Illinois
INDUSTRY

For more details circle NED-5662 on enclosed inquiry slip

FROM 25-125 erratic threaded holes per tap

TO 22,000 clean class 3 threaded holes per tap



HERE'S HOW HY-PRO DID IT...

PART: 18-8 stainless steel hex nut with punched hole

PROBLEM: Tapping with a 10-24 tap, a leading nut manufacturer experienced difficulty holding size and was troubled with excessive tap breakage.

Then They Called in the HY-PRO Sales Engineer

HY-PRO SOLUTION: His recommendation was a standard Hy-Pro 10-24 machine screw tap with one of the exclusive Hy-Pro surface treatments for wear and lubrication. Speed and cutting oil were adopted from extensive tables in Hy-Pro catalog. Production with Hy-Pro taps now averages 22,000 burr-free Class 3 threaded holes at 62 nuts per minute.

Rx Let Hy-Pro solve your tapping problem too—call a Hy-Pro Sales Engineer today.

Order from your Distributor

HY-PRO TAPS

HY-PRO TOOL CO.
NEW BEDFORD, MASSACHUSETTS
A SUBSIDIARY OF CONTINENTAL SCREW COMPANY

For more details circle NED-5663 on enclosed inquiry slip

UNIVERSAL
INDUSTRIAL CONVEYOR

Low First Cost . . . .
Low Maintenance

- Removable sides to permit handling large cartons or parts.
- Motor totally enclosed inside conveyor body easily accessible through removable ventilating panel.
- Elevates to desired height with simple hoisting mechanism.
- Driven by means of roller chain to roller bearing equipped gear box.
- Main drive shaft and idler pulley operate on double-sealed ball bearing.
- Standard belt width, 12 inches. Other widths can be furnished to meet your requirements.
- Belt speed, 74 F.P.M.—adjustable if desired.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

For more details circle NED-5664 on enclosed inquiry slip

STOP...! FLOOR MAINTENANCE COSTS with EMERI-CRETE FLOORING

Vanishing maintenance costs and EMERI-CRETE FLOORING go hand in hand! Made only with diamond-hard CORTLAND EMERY AGGREGATE, cement and water . . . and easily laid by your maintenance department or accredited local contractors . . . EMERI-CRETE FLOORING actually improves with use—is practically indestructible and is ideal for new heavy-duty floors or re-surfacing old ones. In addition, non-skid EMERI-CRETE FLOORING helps speed movement of traffic, reduces wear and tear on equipment, and cuts accidents.

Write for our FREE Proof-Positive Folder No. 601. Read how plants in every industry are enjoying years of maintenance-free service. Lists users, many installations.

Walter Maguire Co., Inc., Dept. ND-8
60 East 42nd St., New York 17, N. Y.
Name_____
Title_____
Company_____
Address_____
City_____ Zone____ State____

EMERI-CRETE FLOORING 6502

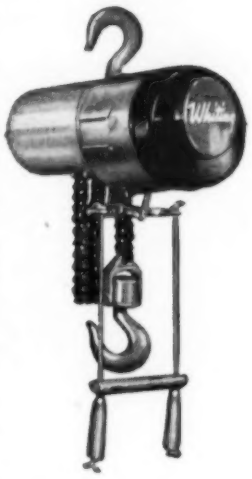
For more details circle NED-5665 on enclosed inquiry slip

ELECTRIC HEATING BAND provides high heat concentration

Of narrow-band type, this electric heating unit can be used in multiples so that, if single unit burns out, only fractional heat and wattage loss occurs. For example, plastics molding machine equipped with these units could be kept in operation while single burned-out element is being replaced. Units are designed to produce at least 40 w per sq in., and nonexpanding metal clamping band assures adequate contact. Made by **Watlow Electric Mfg. Co.,** 1314 N. 23rd St., St. Louis 6, Mo.

For more details circle NED-5666 on enclosed inquiry slip

ELECTRIC CHAIN HOIST in 1/4, 1/2, 1 and 2-ton capacities



While retaining totally enclosed double worm-gear drive of previous models, improved line of electric roller-chain hoists has simplified and stronger construction. Improved braking power and longer brake life are provided by spring-set shoe type motor brake in which lining is bonded to shoe. Location of pull cord at center eliminates any tendency of hoist to tip when it is pulled, and hoist control switch is protected by new mounting. Both switch wiring and motor brake are readily accessible for inspection and repair. Perfect alignment of motor is insured by locking adapter casting into position. Made by **Whiting Corp.,** S. Lathrop Ave., Harvey, Ill.

For more details circle NED-5667 on enclosed inquiry slip

TWIN CARTRIDGE RESPIRATOR protects against vapors and dusts

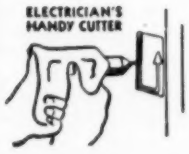
Bearing Bureau of Mines approval BM-2305, model R5055 twin cartridge respirator provides protection against low concentrations of organic vapors and all dusts including nuisance, toxic and pneumoconiosis-producing. Other cartridges for use with basic respirator facepiece protect against acid gases, combined acid and organic gases, ammonia and metal fumes. Illustration shows respirator unit in combination with No. 700 rubber frame goggle. When desired, snaps can be supplied to combine units for both respiratory and eye protection. Made by **American Optical Co.,** 1492 Mechanic St., Southbridge, Mass.

For more details circle NED-5668 on enclosed inquiry slip

MILLER ROTARY
HI-SPEED COPE-SAW DRILL-BIT
IT SAWS CUTS REAMS

SAWS, CUTS, REAMS—sheet metal, wood, plastic, transite, etc. This sensational new high speed combination bit and saw fits any high speed electric 1/4" drill or drill press; takes place of up to $50. in tools. Drills own starting hole to quickly cut, saw or ream an opening in material. Easy to operate. Ideal for auto mechanics, electricians, plumbers, maintenance men, hobby workers, many others. Drill is made of abrasive resistant, finest high speed steel. Will withstand severe, continuous use. Can run red hot. Drill is 1/4" in diameter, overall length, 3 1/2". Cutting section 2" long with flutes ground from solid.

Discounts on Quantity Orders from Dealers



Send Cash, Check or M.O.

only PRICE $3.95 POSTPAID

International Twist Drill Corp. Room 453
624 Wyandotte Kansas City 6, Missouri

For more details circle NED-5669 on enclosed inquiry slip

BLACK DIAMOND
PRECISION DRILL GRINDER

NEW LIFE FOR OLD—EXPENSIVE—SMALL DRILLS PRECISION GRINDING INSURES ACCURATE DRILLING SAVES OVER 50% ON GRINDING AND DRILLING COSTS.

Black Diamond Grinders sharpen small gauge and fractional drills so efficiently and accurately that drill breakage, work spoilage and waste of expensive drill stock is reduced 50% and more.

Anyone can operate a Black Diamond, can keep all small drills sharp—and true centered with smooth lips, accurately ground to the same length, correct angle and clearance for fast precision drilling.

The built-in Diamond-Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity sharp, always ready for use. Hundreds of shops own one or more Black Diamonds—you should own one at least. Detailed bulletin on request.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

For more details circle NED-5670 on enclosed inquiry slip

Pannier Steel Stamps
LAST LONGER ... MARK BETTER

7 REASONS WHY:

1. High tensile tool steel, for durability.
2. Roundedhead distributes hammer blows more evenly for better impressions, less "mushrooming," longer life.
3. Character and size plainly stamped on front for quick, easy identification.
4. "Master Marker" trademark for guaranteed replacement.
5. Rounded shank edges for comfortable use.
6. Extra metal in fillet for increased stamp durability, lower replacement cost.
7. Bevels scientifically angled for clearer stamping, longer life. Outer bevel extends beyond inner bevel depth; prevents breakdown of character face.

Use Pannier "Master Marker" Steel Stamps for a long life of clean-cut, legible impressions. Write for complete listing of styles and sizes.

Other PANNIER "MASTER MARKER" Products
- Steel Dies
- Rubber Dies
- Rubber Stamps
- Stencils & Supplies
- Embossing Equipment
- Branding Equipment
- Marking Inks
- Metal Tags & Badges
- Production Marking Machines

OFFICES
Pittsburgh Chicago
Los Angeles Youngstown
Philadelphia Jacksonville

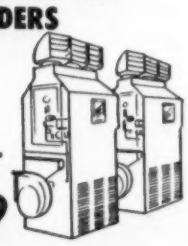
MASTER PANNIER MARKERS

THE PANNIER CORPORATION
301 Pannier Bldg.
Pittsburgh 12, Pa.

For more details circle NED-5671 on enclosed inquiry slip

THEY* "BOOTED OUT" SALAMANDERS

THEY INSTALLED DRAVO HEATERS —



THEY SAVED $4,372.00 PER YEAR

*Rosedale Foundry and Machine Company, Pittsburgh, Pennsylvania

For nearly 50 years, Rosedale, producers of Meehanite Metal castings, heated their shop with salamanders. Then they analyzed costs, found that 4 Dravo *Counterflo* Heaters could heat the 27,000 sq. ft. foundry more comfortably and for *less* money than 39 salamanders.

Result: 4 Dravo Heaters were installed with an immediate saving of *$500 a year* in fuel and labor costs. After 25% annual amortization for 4 years, yearly savings will be $4,372.00! Improved production, more employee comfort, elimination of coke fumes, and saving in floor space—are extra dividends.

Find out how Dravo *Counterflo* Heaters can save for you. Consult your yellow phone book, or write for Bulletin GH 523-79.

DRAVO CORPORATION
DRAVO BUILDING, PITTSBURGH 22, PA.
Sales Representatives in Principal Cities
Mfd. and sold in Canada by Marine Industries, Ltd., Sorel, Que., Export Associates: Lynch, Wilde & Co., Washington 9, D. C.

DRAVO

For more details circle NED-5672 on enclosed inquiry slip

YES! You Can Cut Your Material Handling Costs IN HALF...

If You Answer "NO" to Over 4 of These Questions!

Many companies have discovered that material handling from receiving through production and shipping, has added excessive "HIDDEN COSTS" to the cost of their product . . . If you answer "NO" to more than 4 of these 8 simple questions, mail coupon for money saving facts. There's no obligation.

1. Do you know how many of your workers are engaged in manual lifting, moving and stacking of materials?
2. Have you eliminated skilled workers from wasting time hand-moving materials?
3. Do you know even approximately, what percentage of your product cost represents material handling cost?
4. Can just one man lift and move tons of material with easy, finger-tip control of electric push button, as the case with Automatic Electric Transporters?
5. In storage areas, are you using empty, but usable space overhead, stacking your products ceiling high?
6. Do you know how many tons of material you move into, through and out of your plant daily?
7. Have you done anything to relieve labor and skilled workers, fatigue and loss of time caused by back-breaking hand-lifting, bending and hand-truck-moving of material through your plant?
8. Do you know how much hand-handling of materials is costing you in (1) material and product damage, (2) needless accidents, (3) tired, low morale workers, and (4) production inefficiency?

FREE BOOKLET! *"How to Make Your Material Handling Pay Dividends."* Gives authentic *case histories* and pictures of money saved on daily operations of Automatic Electric Trucks. Write now!

Trade Automatic Mark
61 West 87th Street, Dept. M-5,
Chicago 20, Illinois

Trade Automatic Mark ELECTRIC TRUCKS Lighten LIFE'S LOADS

For more details circle NED-5673 on enclosed inquiry slip

Here's BIG HELP IN TERMINAL WIRING!

The correct wire to correct terminal every time!

The New **JONES FANNING STRIP**

Connections are made through Fanning Strip, on bench or anywhere apart from barrier strip, and quickly slipped into assembly.

Designed for use with Jones Barrier Terminal Strips Nos. 141 and 142, for 1 to 20 terminals.

9-141 Barrier Strip

9-161 Fanning Strip. Pat. applied for.

Simplifies and facilitates soldering. Insures positive correct connections. Saves time. Ideal for harness or cable assembly. Strong construction: Brass terminals, cadmium plated. Heavy bakelite mounting.

Send for complete data on this new basic improvement!

Jones HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

For more details circle NED-5674 on enclosed inquiry slip

Alnor **Velometer**

Gives instant, direct reading of Air Velocity —Anywhere!

Here's a precision-built, self-contained, portable instrument that gives instant, *accurate* reading of air velocities—everywhere, in plants, mines, or mills. Measures speed of flow through ducts, grilles, motors, furnaces, or in the open. Needs no calculations or reference charts. Anyone can use it and get accurate measurements. Available in a wide range of scales, and with a wide assortment of jets and fittings if needed. You'll want full details and prices, so write for Bulletin No. 2448-G. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Illinois.

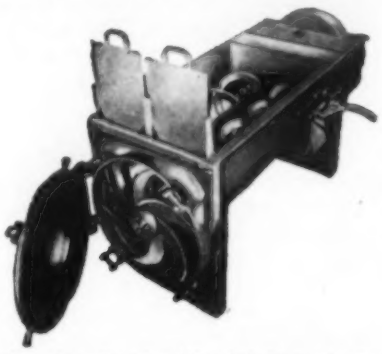
Alnor

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-5675 on enclosed inquiry slip

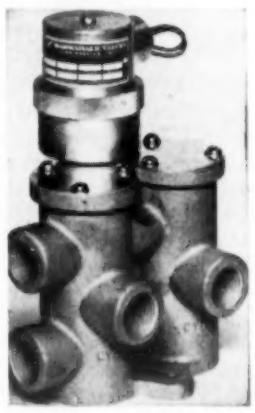
CUTTING-MIXING MACHINE blends products in 10-30 minutes

Wide variety of products is cut and mixed in single operation by Kutmixer machine with automatic discharge. It can be used also for mixing with intermittent cutting or for mixing only. Among products successfully processed by machine are mixed meat products, vegetables, fruits, spices, cereals and other semifluid, viscous and dry materials. Machine has cast-iron construction with mixing trough and cutting chamber lined with stainless steel or other metal to meet requirements. Capacities range from 13 to 100 gal. Made by **Mixers, Inc.**, 3326 N. Allen St., Philadelphia 34, Pa.



For more details circle NED-5676 on enclosed inquiry slip

SOLENOID VALVE four-way type for 150-psi service



Usable for such applications as high speed continuous service on welding equipment, Crescent four-way valves are available for control of air, water and light oil up to 150 psi. Solenoids are designed to withstand continuous operation of up to 600 cycles per minute. Valve is obtainable in pipe sizes of ¼, ⅜, ½ and ¾-in. Available from **Barksdale Valves**, 4907 Santa Fe Ave., Los Angeles 58, Calif.

For more details circle NED-5677 on enclosed inquiry slip

PLUG-IN PANELETTE multi-breaker thermal-magnetic unit

Available for single-phase three-wire or three-phase four-wire systems, NMO plug-in panelette meets most alternating current lighting and appliance circuit switching and protection requirements. Plug-in units are rated 15, 20, 30, 40 or 50 amp. Construction features include box 12 in. wide and 4½ in. deep, door with locks, lugs only from 4 to 28 circuits and circuit breaker mains from 4 to 20 circuits. Made by **Square D Co.**, 6060 Rivard St., Detroit 11, Mich.

For more details circle NED-5678 on enclosed inquiry slip

HANNIFIN AIR PRESSES

1. Minimum Investment!
2. Less Effort!
3. More Output!

59 Models—1/2 Ton to 18 Tons

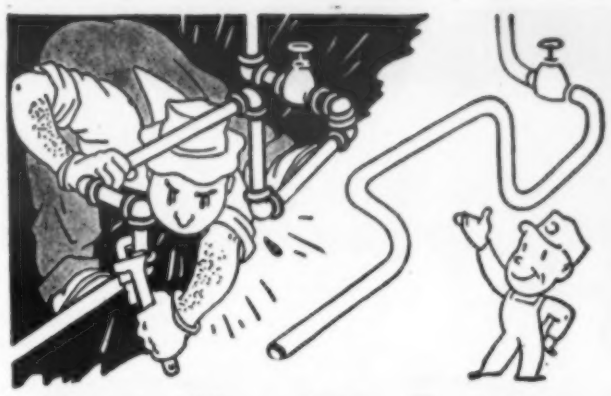
FOR fast, efficient, low cost production with a minimum investment in equipment, Hannifin Air Operated Presses can't be beat for countless pressing, broaching, molding, staking, marking, bending, punching, forming, oil grooving, riveting, keyway cutting, and assembly operations.

HIGH SPEED, EFFICIENT—Effortless speed through new instant-acting valves. Use ordinary shop air supply.

EVERY WORK CONVENIENCE—Finest Hannifin engineering and construction. *Send for descriptive bulletins.* HANNIFIN CORPORATION, 1127 So. Kilbourn Ave., Chicago 24, Illinois.

HANNIFIN *Air Operated Presses*

For more details circle NED-5679 on enclosed inquiry slip

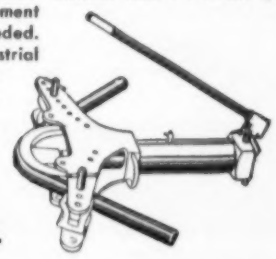


Don't Mend it—Bend it

It Is Much Faster, Easier, Cheaper, Neater, with

Tal's Prestal Pipe Bender

You can make those hard piping jobs easy—bend wrought iron, steel pipe and conduit from ⅜" to 3" in one single, simple operation. Does a perfect workman-like job . . . no kinks, no wrinkles, no heating, no filling. Takes only a few minutes time . . . and a simple, compact motor driven attachment is available if even more speed is needed. Already thousands of leading industrial plants are using this fastest working, portable pipe bender.



HYDRAULIC PORTABLE TAL PRESTAL

TAL PRESTAL BENDER, INC.
Dept. 4
Milwaukee 2, Wis.

For more details circle NED-5680 on enclosed inquiry slip

NO OTHER TESTER

does so much...so well!

WESTON *Model 785* INDUSTRIAL CIRCUIT TESTER

In the shop . . . 28 ranges *in one case* to locate circuit troubles on production equipment.

On the bench . . . 28 ranges *in one case* for checking electrical equipment during manufacture.

In the lab . . . 28 ranges *in one case* immediately available for research and development work.

28 Instrument Ranges

D-C VOLTS: 100 mv, 1/10/50/200/500/1000 volts (20,000 ohms per volt).
A-C VOLTS: 5/15/30/150/300/750 volts.
D-C CURRENT: 50 microamps; 1/10/100 milliamps; 1/10 amps.
A-C CURRENT: .5/1/5/10 amps.
RESISTANCE: 3000/30,000/300,000 ohms; 3/30 megohms.
Stock Accessories Available for Extending Above Ranges

It does *so* much, *so* well, for *so* little. Check your Weston Representative for full details or see your local jobber. Weston Electrical Instrument Corporation, 663 Frelinghuysen Avenue, Newark 5, New Jersey . . . manufacturers of Weston and Tagliabue Instruments.

WESTON *Instruments*

Albany • Atlanta • Boston • Buffalo • Charlotte • Chicago • Cincinnati • Cleveland • Dallas • Denver • Detroit • Houston • Jacksonville • Knoxville • Little Rock • Los Angeles • Middletown • Minneapolis • Newark • New Orleans • New York • Orlando • Philadelphia • Phoenix • Pittsburgh • Rochester • San Francisco • Seattle • St. Louis • Syracuse • Tulsa • Washington, D. C.
In Canada, Northern Electric Co., Ltd., Powerlite Devices, Ltd.

For more details circle NED-5681 on enclosed inquiry slip

You can make big savings in time and labor in your mixing and blending operations with an Alsop Portable Mixer. Other concerns are doing it now on thousands of different liquid products.

You can count on years of trouble-free, low-cost service.

Equipped with our universally adjustable clamp, you can mount it to any container. Alsop Portable Mixers are available in a wide range of horse-powers, propeller combinations and speeds.

Send for this free catalogue.

Alsop Engineering Corporation
508 East Road, Milldale, Conn.

ALSOP ENGINEERING CORP.
Filters, Filter Discs, Mixers, Agitators, Pumps and Tanks

For more details circle NED-5683 on enclosed inquiry slip

HOLES LIKE THESE PUNCHED IN 2 MINUTES

with this—

NEW SEMCO PRESS

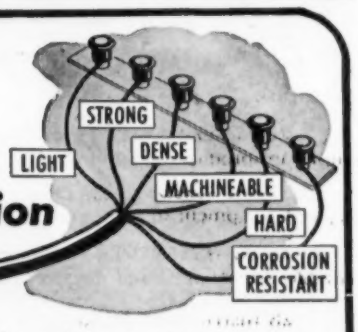
PUNCHES STEEL 1/8" THICKNESS OR LESS

write for full information to—

SERVICE MACHINE COMPANY
INCORPORATED
202 MILLER STREET, ELIZABETH, N. J.

For more details circle NED-5684 on enclosed inquiry slip

Look for the Right Combination



A good product may be made better, or a process less expensive when you select a material with the right *combination* of electrical, mechanical, and chemical qualities.

Synthane is a material that has this *combination*. Strong, light, hard and dense, it is easily machined on standard equipment. Corrosion and moisture resistant, Synthane also possesses excellent electrical properties such as high dielectric strength, low power factor and low dielectric constant.

You can find out more about Synthane's possible place in your product or process by mailing the coupon below. Why not do it today?

TECHNICAL PLASTICS
SHEETS • RODS • TUBES
FABRICATED PARTS
SYNTHANE
MOLDED-LAMINATED
MOLDED-MACERATED

SYNTHANE CORPORATION
North East River Road, Oaks, Pa.
Please send me a copy of the complete Synthane catalog.
Name_____
Firm_____
Address_____
City_____ State_____

For more details circle NED-5685 on enclosed inquiry slip

TUBE TAP CONNECTORS suited to high voltage applications

Wire insulation and grid cap insulation are blended into one homogeneous unit in types 90 ISL and 91 ISL tube cap connectors. Grid cap, lead tailored to desired length and low loss polyethylene combine to provide complete insulation and strain relief. Phosphor bronze, plated clip is designed for long path of tension, based on surrounding tube grid with round surface made to close tolerance. Type 90 ISL fits standard ¼-in. diameter tube top, while other type fits standard glass tubes with 23/64-in. diameter top. Made by **Alden Products Co.**, 117 N. Main St., Brockton 64R, Mass.

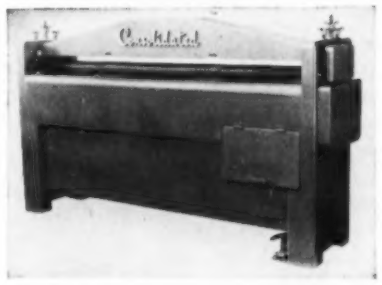
For more details circle NED-5686 on enclosed inquiry slip

PORTABLE LIGHTING SYSTEM supplies automatic emergency light

When usual source of current fails, Underwriters' listed Minuteman portable lighting system supplies illumination for 10,000 sq ft for approximately 5 hours. Each lamp head delivers 100-w light, is adjustable to any position and can be removed from unit for installation on walls and stairways. When normal power is resumed, lights automatically go out and built-in charger restores energy to battery for next emergency. Unit does not require special wiring but is plugged into any 115-v ac outlet. Made by **Electric Cord Co.**, 33 Church St., New York 7, N. Y.

For more details circle NED-5687 on enclosed inquiry slip

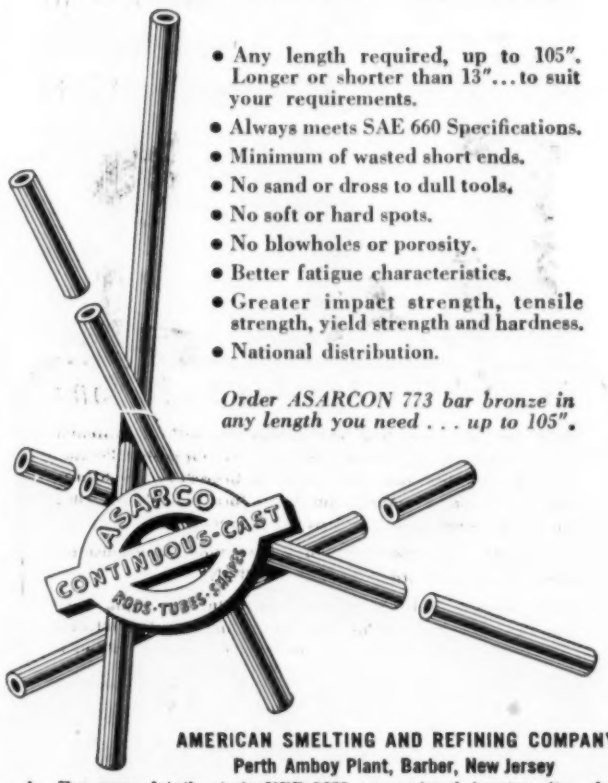
STRAIGHTENING MACHINE for light-gage sheet metals



Designed to accommodate sheet metals up to 18-gage, this Universal roller and straightening machine is recommended for rolling or form rolling of sheet stainless steel, aluminum, zinc, copper and cold or hot-rolled steel. It can be obtained in three sizes for sheets 36, 60 and 72 in. wide and is built with five rollers. Equipped with variable speed transmission to permit synchronizing speed for production work, machine can be adjusted quickly for different materials and types of rolling. Made by **Consolidated Equipment Co.**, 2183 W. Wabansia Ave., Chicago 47, Ill.

For more details circle NED-5688 on enclosed inquiry slip

Asarcon 773 BEARING BRONZE ...IN ANY LENGTH YOU NEED

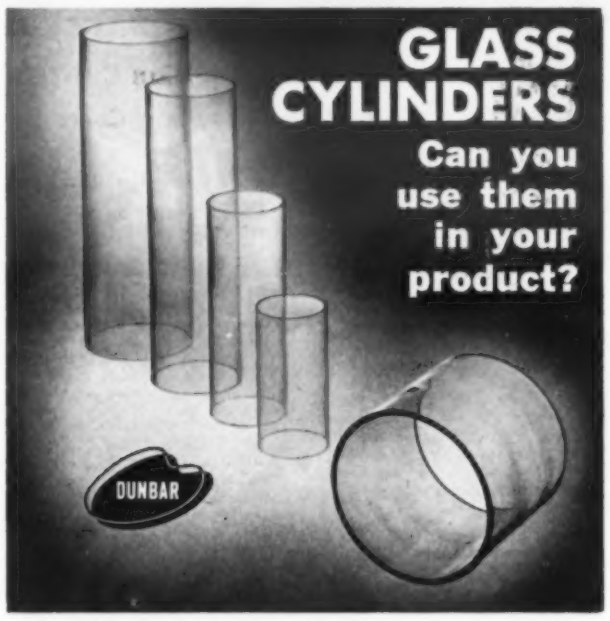


- Any length required, up to 105". Longer or shorter than 13"... to suit your requirements.
- Always meets SAE 660 Specifications.
- Minimum of wasted short ends.
- No sand or dross to dull tools.
- No soft or hard spots.
- No blowholes or porosity.
- Better fatigue characteristics.
- Greater impact strength, tensile strength, yield strength and hardness.
- National distribution.

Order ASARCON 773 bar bronze in any length you need . . . up to 105".

AMERICAN SMELTING AND REFINING COMPANY
Perth Amboy Plant, Barber, New Jersey

For more details circle NED-5689 on enclosed inquiry slip



For dispensers, merchandise displays, visible hoppers, lighting fixtures, sight feeders, meters, columns or any other applications, DUNBAR offers you a wide variety of cylinder sizes in economical quantities. Or we will fabricate blown glass cylinders to your specifications. We invite your inquiries. Write Dept. 67 for our Glass Cylinder catalogue No. C-50.

Dunbar Glass Corporation

DUNBAR, WEST VIRGINIA
NEW YORK CHICAGO CLEVELAND LOS ANGELES

For more details circle NED-5690 on enclosed inquiry slip

MORE WORK between grinds with T-J CUTTERS

Less breakage... Lower Cost!

Your die costs go down . . . and you can raise the feed . . . using T-J Die Sinking Milling Cutters! Their advanced design helps you get utmost *accuracy, speed* and *efficiency* from your machine. T-J cutters made from a standard, extremely high grade steel . . . properly machined . . . scientifically heat-treated and accurately ground. They're *extra rugged* . . . hold a sharp edge longer . . . less breakage! Wide range of T-J standard styles and sizes. Send for new catalog 150. The Tomkins-Johnson Co., Jackson, Mich.

FOR TOUGH JOBS SPECIFY T-J
TOMKINS-JOHNSON
DIE SINKING MILLING CUTTERS

For more details circle NED-5691 on enclosed inquiry slip

YOU JOCKEY BIG SKID LOADS IN A JIFFY WITH *Single Stroke* *

"Weld-Bilt" MECHANICAL LIFT TRUCKS

One quick stroke of the handle under a skid load, and you're ready for action—with this new Single Stroke MECHANICAL LIFT TRUCK. It's easier to maneuver, too, with full 360° swivel, 270° lifting angle. Handle Safety Spring keeps handle in safe vertical position. Has Automatic "Anti-Kick-Back" Handle Release; smooth, full-hydraulic lowering; Front Wheel Equalizer to keep load level. Write for complete details TODAY.

WEST BEND EQUIPMENT CORPORATION
MATERIALS HANDLING ENGINEERS
311 Water Street, West Bend, Wis.

For more details circle NED-5692 on enclosed inquiry slip

WILLSON
SUPER-TOUGH®
Dependable Eye Protection

For eye hazards in heavy duty use you can count on the protection of Willson Super-Tough lenses with their high impact resistance and good optical quality because they are backed by over 75 years of experience. Available in a wide range of sizes and types to assure fit and comfort in cup or spectacle type goggle. See the new Willson catalog for full details. Get a copy from your distributor or write direct.

WILLSON®
Dependable Products Since 1870

WILLSON PRODUCTS, INC., 219 WASHINGTON ST., READING, PA.

▲ For more details circle NED-5693 on enclosed inquiry slip ▲

MICROFILM READER
projects 16 and 35-mm negative or positive film at 19:1 magnification

Featuring scanning device and constant focus, model MPE kodagraph microfilm reader accommodates perforated or unperforated film. Reflecting-type 20-in. square screen has blue-tinted matte finish which diffuses illumination and holds glare to minimum. Scanning device allows film to be moved laterally so that images full width of film can be projected. Projector head has rotating feature: no matter how image is positioned on film, it can be turned upright on screen. Disk-like optical flats hold image in sharp focus and rotate as film moves to produce wiping effect which clears dust from film. Screen is shielded on three sides to reduce extraneous light. Made by **Eastman Kodak Co.**, Industrial Photographic Div., Dept. E, 343 State St., Rochester 4, N. Y.

▲ For more details circle NED-5696 on enclosed inquiry slip ▲

With One OXWELD Blowpipe
Trade-Mark

You can do All these Jobs . . .

- ✓ Weld steel (28 gage to 1 inch thick)
- ✓ Cut steel (up to 8 inches thick)
- ✓ Heavy-duty heating
- ✓ Braze-welding
- ✓ Hard-surfacing
- ✓ Gouging
- ✓ Rivet-cutting

Whether you want to do one—or more than one—of these jobs, all you need is the OXWELD W-17 Blowpipe with the right welding head or a cutting attachment.

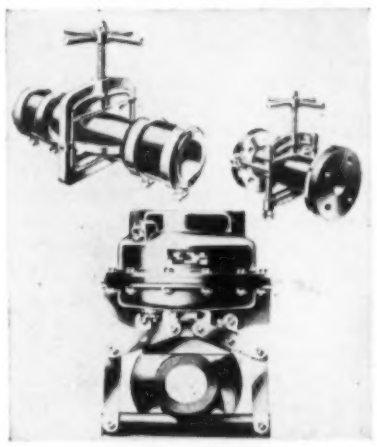
In addition to its adaptability for many uses, the time-proved design and sturdy construction of the W-17 assures dependable, long life. Added years of ***trouble-free service*** mean the greatest overall saving to you. Write today for full information.

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation
30 East 42nd St. UCC New York 17, N. Y.

The term "Oxweld" is a registered trade-mark.

▲ For more details circle NED-5699 on enclosed inquiry slip ▲

PINCH TYPE VALVE
facilitates controlling flow of abrasive and corrosive materials

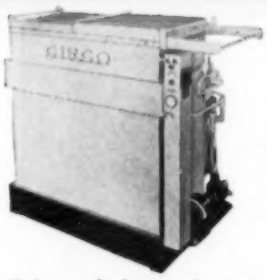


Construction of pinch-type Flex-Valve body allows for its opening or closing frequently or at long intervals without fear of structural failure. Nonclogging and free from water hammer, valve has smooth bore which minimizes incrustation and can be cleaned by tapping or flexing with mallet. It can be placed in throttling position without undue cavitation. For precise controlling, valve is available with positionor.

Three styles are available: slip-on type 7100 in sizes from ½ to 2½ in. which mounts over ends of pipe, flanged-end type 7200 in sizes from 1 to 12 in. and diaphragm motor type 7300 in sizes from 1 to 10 in. Latter types operate air-to-open and air-to-close. Valve is available in standard pure gum rubber, Buna S or N, Neoprene, Butyl, odorless tasteless rubber and also compounded denominations of each. Made by **Flexible Valve Corp.**, 401 Commercial Ave., Palisades Park, N. J.

▲ For more details circle NED-5697 on enclosed inquiry slip ▲

Can You Afford Outmoded Metal Parts Cleaning?



A CIRCO engineered degreaser gives you

1. Thorough and speedy parts cleaning
2. Safe operation—uses a nonflammable, non-explosive solvent
3. Economy of operation
4. Long life with stainless clad, nickel clad or zinc sprayed construction.

Before and after nearly every production operation in the metal working industry, a cleaning operation must be performed. Are you risking high production costs with outmoded cleaning methods?

Circo vapor-spray degreasers eliminate costly, hand-labor operations. *Savings of over 90% in time alone are common.* Not only is valuable time saved but better cleaning is assured. Warm vapor, harmless to all metals, thoroughly penetrates every crack or seam. All traces of dirt, oil and grease are absolutely removed, leaving each part ready for immediate inspection. Depending on size, parts can be removed, *absolutely clean and dry*, in 1 to 15 minutes. Best of all, Circo's fully automatic control system guarantees operating economy.

CIRCO DEGREASERS PAY FOR THEMSELVES

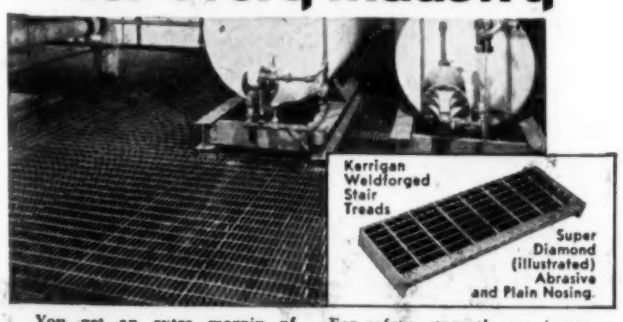
For detailed information send for our catalog covering our standard degreasers. Our engineers will gladly work with you on metal cleaning problems requiring equipment of special design.

CIRCO **CIRCO PRODUCTS COMPANY**
Metal Cleaning Equipment
6531 EUCLID AVE. • CLEVELAND, OHIO

PIONEERS IN THE DEVELOPMENT OF HOT VAPOR CLEANING EQUIPMENT

▲ For more details circle NED-5694 on enclosed inquiry slip ▲

A SAFER, OPEN STEEL STRONGER FLOOR for every industry



You get an extra margin of safety with Kerrigan Weldforged steel flooring and stair treads. Continuous spiral cross bars, slightly above bearing bars and alternating right and left, leave no slick spots. Cross bars are Weldforged into bearing bars to form a one-piece unit of great strength.

For safety, strength, maximum light and ventilation, easy installation and maintenance, always specify Kerrigan Weldforged grating and stair treads. Its uses are many, indoors and out—open flooring, stair treads, sidewalk doors, catwalks, subway grating . . . to name only a few.

Send today for latest catalog — Write Dep't. 21

Weldforged GRATING DIVISION
KERRIGAN IRON WORKS, INC.
NASHVILLE, TENNESSEE
GENERAL SALES OFFICE, 274 MADISON AVE., N.Y.C.

▲ For more details circle NED-5695 on enclosed inquiry slip ▲

FRACTIONAL HORSE POWER GEARS

INTERNAL, HELICAL, SPUR ELLIPTICAL, BEVEL and WORM GEARS. WORMS, RATCHETS and SPROCKETS.
PRECISION WITH VOLUME PRODUCTION
Send for Bulletin

Rynel Corporation
302 MILLER ST. STERLING, ILLINOIS

▲ For more details circle NED-5698 on enclosed inquiry slip ▲

"We stopped both useless shutdowns and motor burnouts from Single Phasing by installing Fusetron fuses in a refrigeration Compressor Circuit."
Glen F. Buschman, Manager
Kirby Risk Electric Motors, Inc.
Lafayette, Ind.

Mr. Buschman continues

"Twice within two weeks during December, 1947, we rewound the same motor for the Rund Packing Company at Lafayette, Indiana. Both times it had burned out on a single phase.

"We found that motor starting currents were causing the 100 amp. 250 volt renewable fuses to blow. When one of them blew, it single phased the motor. The thermals in the starter were oversize so the motor burned up.

"100 amp. FUSETRON dual-element fuses were installed in place of ordinary fuses and the thermals changed to the proper size.

"The FUSETRON dual-element fuses stopped the useless blows on the starting current. This stopped the single phasing that had caused the motor burnouts."

Fusetron DUAL ELEMENT Fuses
Gives All-Purpose 10 Point Protection

1 * Protect against short-circuits.
2 Protect against needless blows caused by harmless overloads.
3 Protect against needless blows caused by excessive heating — lesser resistance results in much cooler operation.
4 Provide thermal protection — for panels and switches against damage from heating due to poor contact.
5 Protect motors against burnout from overloading.
6 Protect motors against burnout due to single phasing.
7 Give DOUBLE burnout protection to large motors — without extra cost.
8 Make protection of small motors simple and inexpensive.
9 Protect against waste of space and money—permit use of proper size switches and panels.
10 Protect coils, transformers and solenoids against burnout.

* Fusetron fuses have high interrupting capacity as shown by tests of the Electrical Testing Laboratories.

DON'T RISK LOSSES

FUSETRON
TRUSTWORTHY NAMES IN ELECTRICAL PROTECTION
BUSS

One needless shutdown . . .
One lost motor . . .
One burned-out solenoid . .
One destroyed switch or panel . . .

May cost you far more than replacing every ordinary fuse with a FUSETRON dual-element fuse.

Protect yourself by installing them in every set of fuse clips throughout the entire electrical system.

FUSETRON is a trade mark of
BUSSMANN MFG. CO.,
Division of McGraw Electric Co.,
University at Jefferson St. Louis 7, Mo.

▲ For more details circle NED-5700 on enclosed inquiry slip ▲

SUPER-SPACER

for quick, accurate indexing and exact location of work.

Saves expensive setup time on short or long runs. Ideal for milling, drilling, grinding, planing, slotting, and other operations. Pays for itself over and over. Write for information now!

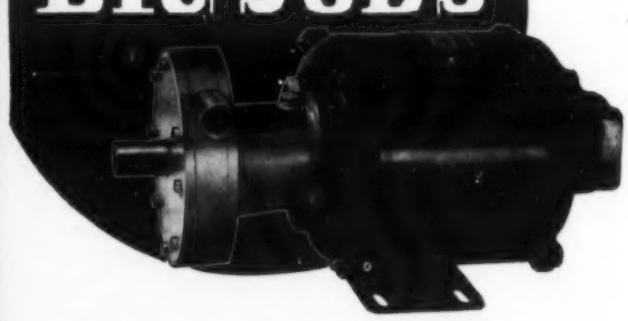
HARTFORD Special

THE HARTFORD SPECIAL MACHINERY CO. HARTFORD 5, CONN.

▲ For more details circle NED-5701 on enclosed inquiry slip ▲

Little fellows DO THE

BIG JOBS



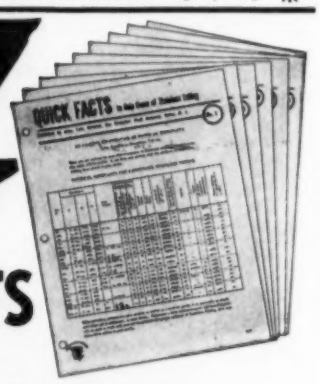
Eastern Centrifugal Pumps are CLOSE-COUPLED and available in SPECIAL METALS. Over 100 models to choose from to pump from 0-70 psi, 0-70 gpm. Economical and trouble free.

FOR EASTERN'S NEW CENTRIFUGAL CATALOG 100, WRITE TO DEPT. AH

Eastern Industries Inc.
296 Elm St., New Haven, Conn.

▲ For more details circle NED-5702 on enclosed inquiry slip ▲

NEW For STAINLESS TUBE USERS



QUICK FACTS
Bulletins

giving you information on

- *Corrosion Resistance*
- *Fabrication*
- *Physical Constants*

—and new data to help you get more from every dollar you spend for Stainless Tubing or Pipe.

For your QUICK FACTS about Stainless Tubing, return the coupon today.

THE CARPENTER STEEL COMPANY
Alloy Tube Division • 118 Springfield Road, Union, N. J.

Please send me a set of QUICK FACTS for Users of Stainless Tubing, and put my name on the list to receive future bulletins.

NAME.....TITLE.....
(PLEASE PRINT)
COMPANY.....
(COMPANY AND TITLE MUST BE GIVEN)
ADDRESS.....
CITY.....ZONE.....STATE.....

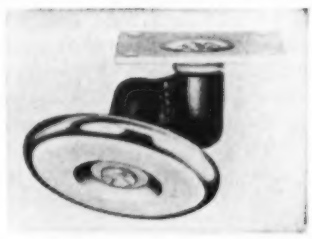
▲ For more details circle NED-5703 on enclosed inquiry slip ▲

VARIABLE SPEED TRANSMISSION
improved model is easily reversible

Capable of providing infinite speed variation from 0 to 425 rpm output at 1750-rpm input, model 14R Zero-Max transmission is recommended for throttles, governors, aerials, directional controls and drum rotations. Reversal of transmission, even when operating is accomplished by movement of element about output shaft. Reversal of motor rotation, however, does not change direction of rotation of output shaft. Standard unit has torque rating of 10 lb-in. on output shaft. Complete with case, unit is priced at $23.95. Made by **Revco, Inc.,** Dept. NED, 405 Thorpe Bldg., Minneapolis, Minn.

▲ For more details circle NED-5704 on enclosed inquiry slip ▲

LIGHT-DUTY CASTER
saucer-shaped wheel rolls at angle



Consisting of 3-in. diameter wheel on swivel base, Flying Saucer caster measures only 3-1/16-in. high. Wheel is mounted at extreme angle to roll over obstacles and move easily on rough floors. Caster is designed for use on relatively light equipment which requires low overall height and fast swiveling. Plate and saucer are heavy gage steel, formed and embossed for strength. Saucer wheel is case hardened for wear and abrasion resistance. Made by **Bassick Co.,** Dept. N, Bridgeport 2, Conn.

▲ For more details circle NED-5705 on enclosed inquiry slip ▲

ARC WELDER
has electrically-adjusted reactor

Line of transformer type alternating current arc welders with power factor correction includes model TSP-205-C rated 200 amp at 30 v and type TSP-182-C with limited input for operation on REA lines and rated 180 amp at 25 v. Handwheel switch controls five main taps of welding current from low to maximum, and rheostat control knob regulates amount of direct current flowing into reactor to give 100 fine welding current settings in each of five main steps. Thus 500 settings are instantly available. Instantaneous striking arc is provided. Model TSP-205-C operates on single-phase 60 cycles either 220/440 dual voltage or 550 v. Other type operates on single-phase 60-cycle 230-v ac. Made by **Hobart Brothers Co.,** P. O. Box 13, Hobart Sq., Troy 1, O.

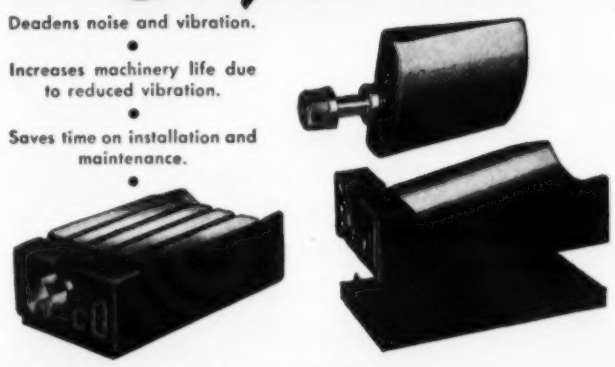
▲ For more details circle NED-5706 on enclosed inquiry slip ▲

NEW

VIBRATION ABSORBING MACHINE LEVELING

Empco JACK

Deadens noise and vibration.
•
Increases machinery life due to reduced vibration.
•
Saves time on installation and maintenance.
•



Tests have proven that "Controlled vibration means increased productivity and decreased maintenance costs." That is why the new Empco Jacks, featuring VI-SORB, the vibration absorbing mounting pads, save many times their initial cost. With the combined features of Empco's self-aligning, two-way control Jacks and VI-SORB pads, set-up and maintenance costs are greatly reduced. For complete data and prices on the new Empco Jack with VI-SORB pads, write or wire today. Immediate delivery.

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

▲ For more details circle NED-5707 on enclosed inquiry slip ▲

TIME SAVING · MONEY SAVING
ONE MAN OPERATION

▲ For more details circle NED-5708 on encl

Where equipment has to be 7

you'll fi

to be logged, c
stuff built into
Mathews En
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will do this hec
So, don't worry
to Mathews En
Engineering
cities.

MCC

MATHEWS C

GENERAL OFFICES *Mathews Conveyer Compan*
PACIFIC COAST DIVISION *Mathews Conveyer Comp*
CANADIAN DIVISION *Mathews Conveyer Comp*

▲ For more details circle NED-5709 on encl

Union Metal Fork Roll-Over Box helps operations go efficiently at Crucible Steel Casting Co., Cleveland, Ohio.

GREATER TU

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DICT
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foundry
scrap, it
furnaces
er". I
foundry

UNION METAL
Materials Handling Equipme

▲ For more details circle NED-5710 on encl

Houdaille*

Oil Dispensing Unit

This handy truck is designed primarily to dispense oil from drums to machine tool reservoirs or sumps. May also be used to transfer oil between drums or to remove oils or coolants from tanks for dispensing to machine tool sumps.

Unit consists of vacuum pump, motor and pivoted drum platform mounted on heavy steel wheels equipped with roller bearings. Mercoid liquid level control prevents overflow. Quick-Change, air-tight lid is provided for open-end drums. One man can easily operate the unit and do a fast, *clean* oil handling job at considerable saving in time and labor. Ideal for use either in central reservoir plant layouts or where many individual sumps require servicing.

Write for complete information, specifications and operating details of the Houdaille Oil Dispensing Unit.

*Pronounced Hoo-Dye

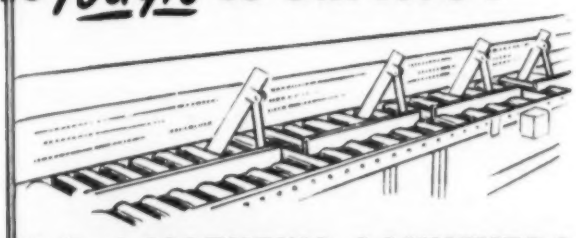
Pivoted drum platform makes it easy to load or dump oil drums.

Manufacturers of the Houdaille Mobile Coolant Filter and the Houdaille Sump Cleaner

HONAN-CRANE CORPORATION
40 Wabash Avenue, Lebanon, Indiana
A subsidiary of **HOUDAILLE-HERSHEY CORP.**

NED-5710 on enclosed inquiry slip ▲

to be *Tough* to survive.



you'll find MATHEWS CONVEYERS

Conveying equipment going into heavy industry has to be rugged, or it won't be around for long. It must have the right stuff built into it if it is to stay on the job.

Mathews Engineers are specialists in the field of heavy conveying. Whether the loads are ingot mold flasks, coils of steel, or brass bars—whether they weigh one ton or twenty-five—handling them is an everyday job for Mathews Conveyers.

There is power or gravity equipment in the Mathews line that will do this heavy conveying with a minimum of costly maintenance. So, don't worry about your heavy conveying problems—give them to Mathews Engineers.

Engineering offices located in principal American and Canadian cities.

•

MATHEWS CONVEYERS

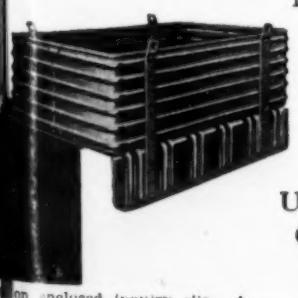
Mathews Conveyer Company . . . . . Ellwood City, Pennsylvania
Mathews Conveyer Company West Coast . . San Carlos, California
Mathews Conveyer Company, Ltd. . . . . Port Hope, Ontario

NED-5709 on enclosed inquiry slip ▲

GREATER TURNOVER...BIGGER SAVINGS!

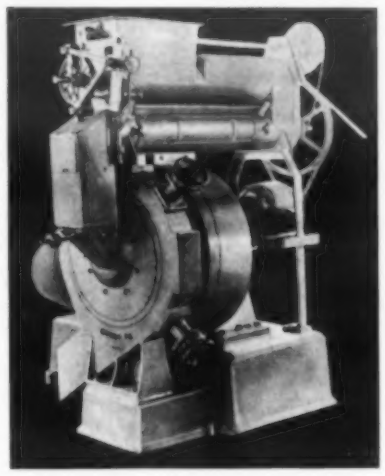
with UNION METAL fork roll-over boxes

PICTURED here is a typical example of a versatile Union Metal Fork Roll-Over Box at work in a foundry—saving time and reducing costs. Loaded with scrap, it is carried to the charging buckets for electric furnaces. It's completely emptied in one quick "roll-over". In between charges, the boxes handle chips, foundry sand, borings and other material. Union Metal Boxes, Skids, Pallets and Combinations speed work and make savings wherever materials must be moved or stored. For information, write The Union Metal Manufacturing Company, Canton 5, Ohio.



NED-5711 on enclosed inquiry slip ▲

PELLET MILL
adaptable to process industries



Although designed to meet special requirements of custom feed manufacturers, this No. 500 Simplex pellet mill can be adapted readily to many industrial processing operations. It is V-belt driven by 25-hp motor mounted on base to produce compact, accessible unit. Independent drive for feeder-conditioner consists of 1-hp motor controlled by magnetic starter with overload and reduced voltage protection which automatically cuts out motor if conditioner is overloaded. Made by **Sprout, Waldron & Co.**, 179 Sherman St., Muncy, Pa.

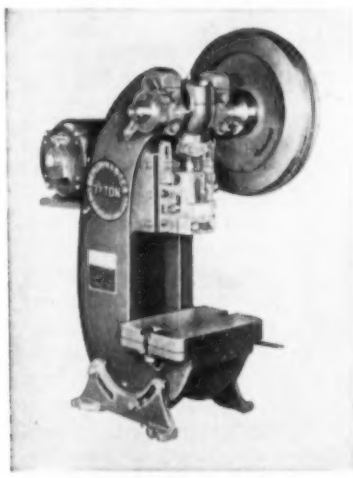
▲ For more details circle **NED-5711** on enclosed inquiry slip ▲

RUST INHIBITING PAINT
serves also as finish coat

Applicable to damp as well as dry surfaces, Certified No. 425 rust inhibiting oil base paint penetrates rapidly through rusted surface and expels moisture from beneath. It can be used on new metal or that which has already rusted. Available in choice of colors, it is resistant to fumes, salt air and weather and withstands dry heat up to 500° F. Made by **United Laboratories, Inc.**, 16804 Euclid Ave., Cleveland 12, O.

▲ For more details circle **NED-5712** on enclosed inquiry slip ▲

7½-TON PUNCH PRESS
has 9-in. vertical die space



Oversize die capacity of Benchmaster punch press in no way hampers use of standard die sets but provides extra space for use of complex dies of semiautomatic or fully automatic type. It also aids in use of roll and hopper type feeding devices and facilitates many difficult operations at high production rates. Ram is equipped with 1-9/16-in. diameter shank hole. Standard stroke is 1¼ in., but special strokes up to 2½ in. can be obtained. Bolster plate measures 8 x 11 in.; and to accommodate special work, bed is equipped with 4 x 5-in. rectangular opening for bottom ejection. Made by **Benchmaster Mfg. Co.**, Dept. NED-7, 2952 W. Pico Blvd., Los Angeles 6, Calif.

▲ For more details circle **NED-5713** on enclosed inquiry slip ▲

SYNTRON
"Vibratory"

PARTS FEEDERS

Speed up the processing of those "hard-to-handle" parts by automatic machines, assemblers, inspectors, etc.

Vibration moves the parts up and around the spiral track at the desired speed—and selectors orient the parts to their desired discharge position.

Send us samples of your most troublesome parts—our Engineering Department will be glad to make tests and submit recommendations and quotations—write to—

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

▲ For more details circle **NED-5714** on enclosed inquiry slip ▲

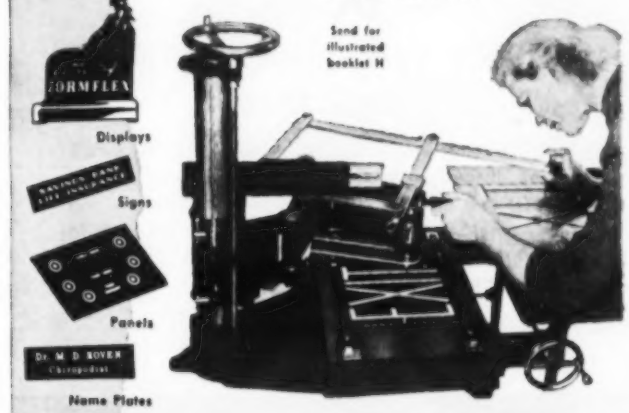
Engraving

Here is the most versatile machine...So simple to operate by unskilled labor.

PROFILING VERTICAL MILLING

NEW HERMES Engravograph

This heavy duty bench type model covers a larger engraving area than any other machine of its kind.



NEW HERMES, Inc.
Dept. #26 13-19 UNIVERSITY PL. • NEW YORK 3
World's Largest Manufacturer of Portable Engraving Machines

▲ For more details circle **NED-5715** on enclosed inquiry slip ▲

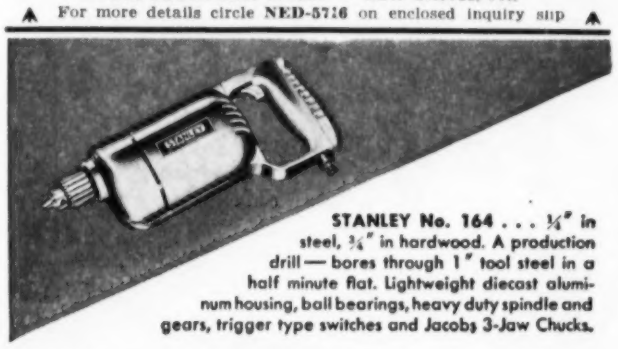
Many uses for JOHNSON BRONZE BARS

BUSHINGS, bearings, thrust plates, etc., can be cut from Johnson Universal Bronze Bars as you need them. These bars are completely machined outside diameter, inside diameter and ends. No waste . . . no defects. Cored bars are available in inside diameters from ½" to 7¾", and outside diameters from 1" to 10", in a range of wall thicknesses. Solid bars from ⅝" to 8" diameters. Complete stock is maintained by distributors and warehouses.

WRITE TODAY FOR CATALOG

Johnson Bronze
SLEEVE BEARING HEADQUARTERS
580 SOUTH MILL STREET • NEW CASTLE, PA.

▲ For more details circle **NED-5716** on enclosed inquiry slip ▲



STANLEY No. 164 . . . ¼" in steel, ¾" in hardwood. A production drill — bores through 1" tool steel in a half minute flat. Lightweight diecast aluminum housing, ball bearings, heavy duty spindle and gears, trigger type switches and Jacobs 3-Jaw Chucks.

2 NEW ¼" Electric Drills

See these new drills and other Stanley electric tools at your industrial distributor's, or write Stanley Electric Tools, 563 Myrtle Street, New Britain, Connecticut.

STANLEY
Hardware • Tools • Electric Tools
Steel Strapping • Steel

STANLEY No. 166 . . . ¼" in steel, ¾" in hardwood. Same as No. 164 above but with pistol grip handle.

▲ For more details circle **NED-5717** on enclosed inquiry slip ▲

For Tight, Safe Connections on Hose for Every Service..

"BOSS"

WASHER TYPE FEMALE COUPLING STYLE W-16

For all high or low pressure steam, air and fluids, including oil, hydraulics, butane, etc. Furnished with efficient "Boss" Offset and Interlocking Clamps. Designed to provide unequalled strength, efficiency and safety, and to prevent damage to hose ends. Sizes ¼" to 6". Cadmium plated—rustproof.

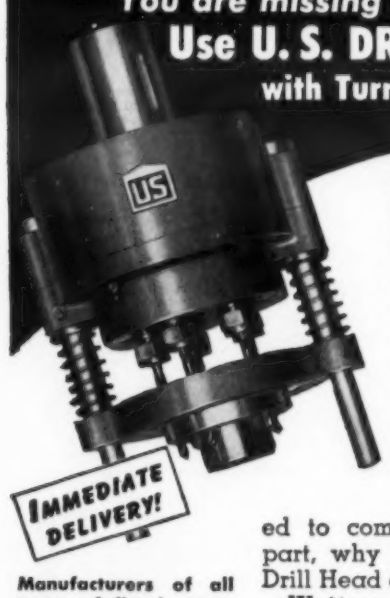
Stocked by Manufacturers and Jobbers of Mechanical Rubber Goods.

DIXON VALVE & COUPLING CO.
HANCOCK ST. and COLUMBIA AVE., PHILADELPHIA 22, PA., U.S.A.
BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON • TORONTO

For more details circle NED-5718 on enclosed inquiry slip

You are missing a bet!

Use U. S. DRILL HEADS with Turret Lathes . . .



IMMEDIATE DELIVERY!

Multiple Spindle Drill Heads have many uses, yet oftentimes they are not considered as being applicable to automatic turret lathes.

If you want to reduce labor costs and the number of operations required to complete a particular part, why not see how U. S. Drill Head engineers can help.

Write or wire us today. There's no obligation, and the chances are that we can save you time and money.

Manufacturers of all types of fixed center and individual lead screw tapping heads.

• Write Today for FREE 1950 Catalog

US HEADS

UNITED STATES DRILL HEAD CO.
SINCE 1915 Dept. H, 616-618 Burns Street, Cincinnati 4, Ohio

For more details circle NED-5719 on enclosed inquiry slip

Varglas SILICONE

Electrical Insulating Tubing and Sleeving for wide temperature ranges . . .

Between 85° F below Zero and 500° F above Zero

Owes its amazing temperature range to a combination of *Varglas* and *Silicone*. Resists moisture and oil—flame resistant and self-extinguishing—Various NEMA colors where required. Pioneered by Varflex.

TEST VARGLAS SILICONE IN YOUR PLANT.

Write today for your free folder of working samples.

NEW SLEEVING AND TUBING LINE

Low cost VARFLO for applications that do not have to allow for high operating temperature. Won't fray — takes rough handling without loss of dielectric — won't support combustion (made with Fiberglas braid). Samples and prices on request.

Varflex CORPORATION
310 N. Jay St.
Rome, N. Y.

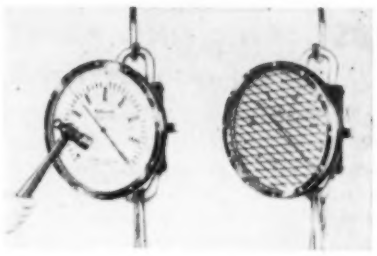
For more details circle NED-5720 on enclosed inquiry slip

ROTARY SELECTOR SWITCHES
single, double or triple pole decks

Six basic plates and three types of rotors can be used to construct oval rotary selector switches having from one to three poles per deck or gang with other mechanical and electrical details designed to specifications. As many as 18, 9 or 6 positions can be obtained in single, double or triple pole types respectively. These may be single, double or triple pole decks exclusively or combination of different types. Made by **Shallcross Mfg. Co.**, 10-F Jackson Ave., Collingdale, Pa.

For more details circle NED-5721 on enclosed inquiry slip

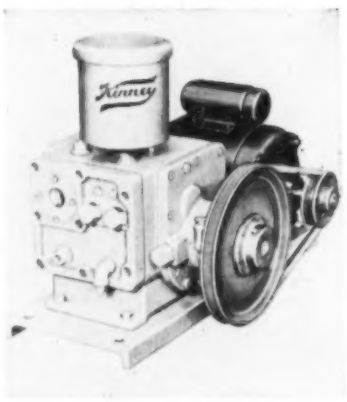
HYDRAULIC CRANE SCALES
employ impact-resistant dial glass



Protective metal guards for scale dials can be eliminated by using Hydroscale special tempered dial glass that is up to five times as strong as plate glass of equal thickness and yet will bend as much as 20 degrees without breaking. Since it will also absorb thermal shock up to 500° F without breaking or distorting, it is suitable for use in heat treat areas. It can be polished and wiped without scratching. Made by **Hydroway Scale, Inc.**, 20624 W. Eight Mile Rd., Detroit 19, Mich.

For more details circle NED-5722 on enclosed inquiry slip

COMPOUND VACUUM PUMP
free-air displacement is 4.9 cfm



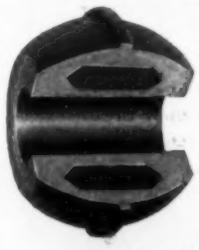
Powered by ⅓-hp electric motor, small model CVD 3534 compound vacuum pump employs double-sealing oil reservoirs to provide continuous oil purification to maintain consistent high vacuum regardless of surrounding atmospheric conditions. On blank test, each unit is required to produce McLeod gage absolute pressure readings of 0.001-mm Hg. Pump is compact, measuring less than 16 in. high, and does not require any 'warm-up' period before being put into operation. Made by **Kinney Mfg. Co.**, 3612 Washington St., Boston, Mass.

For more details circle NED-5723 on enclosed inquiry slip

New CONGRESS LUBRALIFE PILLOW BLOCKS

Permanently Lubricated Self-Aligning

Throw away that dirty, messy oil can! Congress Pillow Blocks never require oiling, yet there is no oil drip. They are rust free, quiet, trouble free, easily installed.



- Perfect Alignment
- Rugged Construction
- Heavy Load Capacity
- NO OILING!

Oil resisting rubber grommets equipped with static dissipator, to prevent transmission of any vibration of the rotating parts, are also available.

The test tube at the right shows the *actual amount* of oil contained in a 5/8" bore Lubralife bearing.

Write for Literature.

CONGRESS DIAMOND BORED DRIVES
3750 E. OUTER DRIVE, DETROIT 34, MICH.

For more details circle NED-5724 on enclosed inquiry slip

POSITIVE PROTECTION AGAINST PRESSURE BUILD-UP

CRANE no. 960 AUTOMATIC PRESSURE REGULATORS

Crane Brass Regulators not only reduce pressure, they hold it at the desired point regardless of moderate fluctuations in inlet pressure. Even when outlet steam and air are not being used, outlet pressure cannot build up to inlet pressure.

Once installed, Crane No. 960 Regulators work automatically . . . require only periodic inspection and cleaning. All working parts are easily renewable. Piston operates in removable liner. Any wear is on liner—not on body walls.

Made for initial inlet pressures up to 250 pounds steam or air, in four outlet pressure ranges: 1 to 10, 5 to 30, 20 to 100, or 90 to 200 pounds. Sizes up to 2 in. For complete information, SEND FOR FOLDER AD-1607A.

CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

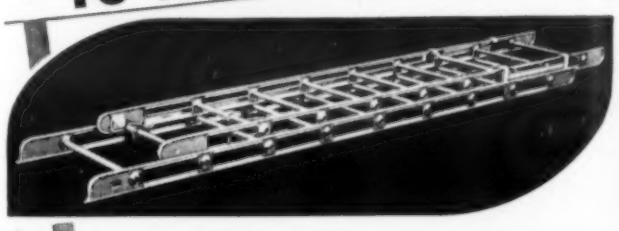
EVERYTHING FOR EVERY PIPING SYSTEM

CRANE

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

For more details circle NED-5725 on enclosed inquiry slip

REMARKABLY EASY TO HANDLE!



The ALCO-LITE Type LDL ALUMINUM LADDERS

The ALCO-LITE Type LDL ladder was designed specifically for use where extreme light weight combined with considerable strength is required. The fly ladder is supplied with locks, pulleys and ropes as standard equipment. Easy to move about, easy to erect, easy to store. Fine for general purpose use.

Write for information describing nine types of ALCO-LITE *aluminum industrial ladders.*

Pioneer Builders of Aluminum Industrial Ladders

ALCO-LITE ALUMINUM LADDERS
ALUMINUM LADDER COMPANY

346 CARBIS STREET • WORTHINGTON, PENNA.

For more details circle NED 5726 on enclosed inquiry slip

FEED STOCK AUTOMATICALLY with BENCHMASTER FRICTION ROLL FEED

- FITS ALL BENCHMASTERS
- ADAPTS TO MOST OTHER PRESSES
- LOW PRICE

No more accidents, no wasted time, better production with this new Low Cost BENCHMASTER FRICTION ROLL FEED. Handles all stock—metal, wood, plastics, cardboard, etc., up to 3/16" thick, 3" wide. Feeds uniformly and accurately. Feed is adjustable from 0 to 3".

FRONT OR SIDE FEED. Bolts on either front or side of press for through or cross feed. Adjustable height aligns rolls level with die. Ideal for use on your Benchmaster and can also be adapted to most other presses.

High quality. Built to rigid Benchmaster standards assuring years of trouble-free service. Get yours today!

FRONT MOUNT

Dept. NED

benchmaster MANUFACTURING COMPANY
3952 WEST PICO BOULEVARD
LOS ANGELES 6, CALIFORNIA
WORLD'S LARGEST PRODUCER OF SMALL PUNCH PRESSES

For more details circle NED-5727 on enclosed inquiry slip

FREE! and IMPORTANT

Right now! Write for your FREE copy of this informative, well illustrated brochure that points up the many uses and advantages of

Clearsite

PLASTIC Selling Containers

for the packaging of drills and tools, industrial jewels, taps and dies, screws, springs, nozzles, valves, fine machine parts, fishing tackle, electrical parts, and many, many others.

Clearsite is made only by

CELLUPLASTIC CORPORATION

58 AVENUE L • NEWARK 5, N. J.

America's #1 Source For Plastic Containers • Established 1919

For more details circle NED-5728 on enclosed inquiry slip

NEW

ARCOS TENSILEND

Low Hydrogen Electrodes for better welding of high tensile steels

The new Tensilend Electrodes have been developed and added to the Arcos low hydrogen family to help you overcome fabricating problems on high tensile steels.

NO PREHEAT NEEDED
When welding low alloy or high carbon steels.

UNDERBEAD CRACKING ELIMINATED
Stainless type coating controls hydrogen.

SUPERIOR PHYSICALS
High ductility and impact strength.

SAVINGS IN ELECTRODE INVENTORY
One electrode welds high strength, low alloy steels, mild steel under highly restrained conditions, or sulphur-bearing free machining steels.

ARCOS CORPORATION • 1500 South 50th St., Philadelphia 43, Pa.

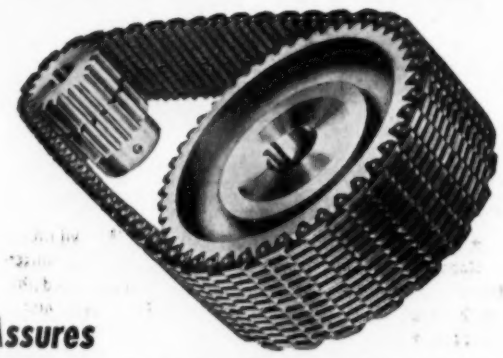
Write for bulletin "The ABC's of Welding High Tensile Steels"

WELD WITH ARCOS

Specialists in Stainless, Low Alloy and Non-Ferrous Electrodes

For more details circle NED-5729 on enclosed inquiry slip

WHITNEY SILENT CHAIN



Assures Efficient, Positive Power Transmission

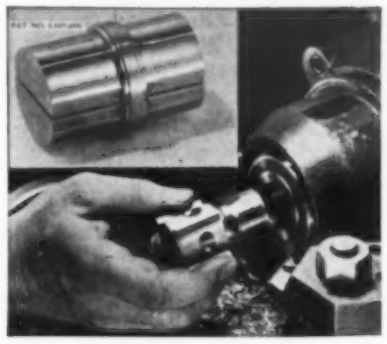
Regardless of your drive problems, Whitney Silent Chain will meet your particular requirements. These tough, rugged chains deliver full power without friction loss or slippage. Their positive grip helps maintain product uniformity. They withstand shock loads without breakage... give long life and cut maintenance to the bone. And remember Whitney Cut Tooth Sprockets complete the combination assuring efficient power transmission. It will pay you to *standardize* on Whitney. Write for complete information.

WHITNEY CHAIN CO.

203 Hamilton Street, Hartford 2, Conn.

For more details circle NED-5730 on enclosed inquiry slip

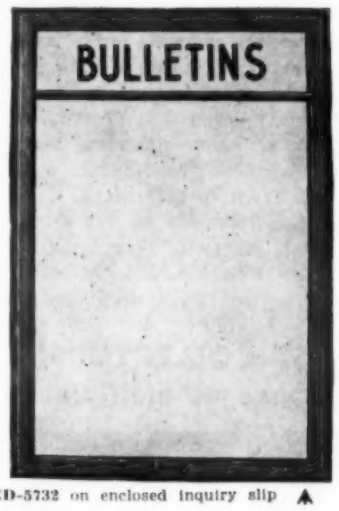
EXPANDING ARBOR
accommodates 33/64 to 1-in. ID work



Designed for holding work pieces by inside diameter while machining, counterboring, chamfering or finishing outside surface, Auto-Arb expanding arbor permits chucking and unchucking work without stopping spindle. It can be used for machining wood, plastics and other materials as well as metal, and for coil winding applications. Type B series will accommodate work with inside diameters ranging from 33/64 to 1-in. on machine with ½-in. collet and from 1-1/64 to 1½ in. with 1-in. collet. Made by **Asco Corp.**, 17718 Waterloo Rd., Cleveland 19, O.

For more details circle NED-5731 on enclosed inquiry slip

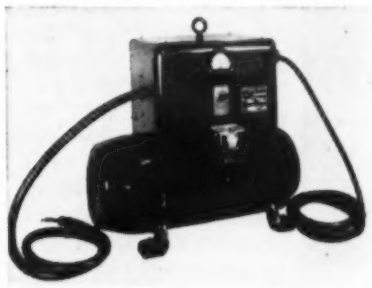
BULLETIN BOARD
is cork faced with hardwood frame



Measuring 27 x 40 in. overall, Ipco cork-faced bulletin board provides open area for bulletins and other notices measuring 23 x 30 in. Top panel can be eliminated to increase usable area to 23 x 36 in. It is recommended for use in offices, plants, institutions and commercial establishments. Cork face is natural tan color and satin-finished frame is stained to harmonize. Made by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

For more details circle NED-5732 on enclosed inquiry slip

SINGLE-CIRCUIT CHARGER
for industrial truck batteries



Capable of charging six-cell lead-acid storage battery of up to 300-amp-hour capacity, model No. 669-6-1 single circuit charger is built as integral unit, is completely automatic in operation and charges batteries in 8 hours or less. Standard equipment includes 10-ft three-conductor power cable with lugs and 6-ft two-conductor battery charging cable. Made by **Motor Generator Corp.**, Hobart Sq., Troy 1, O.

For more details circle NED-5733 on enclosed inquiry slip

SPACE-SAVING CYLINDERS

PACK POWER IN MINIMUM AREA

1½ to 8" bores available for prompt delivery

O-M hydraulic, water, air cylinders save up to ⅓ in space required. Unique circumferential key locks honed steel tubing to compact end caps . . . yet disassembly is a matter of seconds. Ports oriented radially to infinite number of positions. All mounting brackets available. Steel (no castings) and bearing bronze throughout. *Write today for specifications.*

ORTMAN-MILLER

MACHINE CO., INC.

1222-4 150th Street, Hammond, Indiana

For more details circle NED-5734 on enclosed inquiry slip

FLEXLOC

ONE-PIECE SELF-LOCKING NUTS

The FLEXLOC is one-piece, all-metal... has ample tensile and long life. It is a Stop and Lock-Nut that can be reused many times. Its "chuck-like", resilient locking segments lock the FLEXLOC securely in any position on a threaded member. It positively "won't shake loose", yet can be removed easily with a wrench.

Write for Catalog 619, it's full of Information.

SPS STANDARD PRESSED STEEL CO.

JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-5735 on enclosed inquiry slip

YOUR BEST BET

to get simple, inexpensive speed control from *a-c power*

Have you a machine whose output could be increased or performance improved by installing a simple low-cost adjustable-speed drive?

A General Electric Tri-Clad ACA motor might be the answer. Look at these points in its favor:

IT RUNS ON A-C POWER! No conversion equipment whatsoever is needed. Make the usual electrical connections, couple the shaft to the load, and the ACA is ready for work.

YOU DIAL THE SPEED! A simple twist of the dial on top of the motor gives you any speed up to 20:1, *and* it's held within narrow limits regardless of load changes.

IT'S A REAL "PACKAGE" DRIVE! The entire drive (except starting control) is enclosed in a single housing only slightly larger than a constant-speed motor of the same rating.

WANT MORE INFORMATION?

Here's what to do. FIRST, write us for a copy of Bulletin GEA-4883 which describes the ACA motor in detail. Or, if you want to know more about adjustable-speed drives in general, ask for Bulletin GEA-5334. SECOND, if you'd like the help of a specially trained engineer on a specific adjustable-speed application, call your nearest G-E office. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

Quick Facts

ABOUT GENERAL ELECTRIC ACA MOTORS

SPEED RANGE—3:1 and 6:1 (continuously), 20:1 (intermittently)

HORSEPOWER—3 to 75

VOLTAGE—220, 440 or 550 volts—a-c, 60 cycle, 3-phase power

STARTING—Full voltage (Secondary control when creeping speeds are required)

SPEED REGULATION—5 to 10 per cent on the high-speed setting

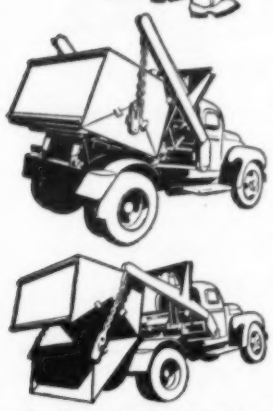
The ACA motor is one of a complete line of General Electric adjustable-speed drives.

GENERAL ELECTRIC

646-13

For more details circle NED-5736 on enclosed inquiry slip

For Drastic Savings In Materials Handling Costs



Firms everywhere using the Dempster-Dumpster system report tremendous savings in materials handling costs. One plant saves more than $70,000 annually; another saves $50,000. in scrap and trash handling alone. Quick pick-up, hauling and dumping of detachable containers makes one Dempster-Dumpster truck hoisting unit worth 5 to 10 conventional trucks. One man (the driver) and a truck handle any number of standard or special containers, 3 to 10 cu. yds. . . built to handle any type of material. Illustrations from top to bottom show typical pick-up, hauling, and dumping operations. Write for catalog 247 today.

DEMPSTER BROTHERS, Inc.
480 N. KNOX
KNOXVILLE, TENNESSEE

For more details circle NED-5737 on enclosed inquiry slip

We Make the SECONDS COUNT for YOU!

Our method saves you time and labor figured not only in minutes, hours, days or months, but SECONDS AS WELL, through the remarkable speed of

DETROIT POWER Screwdrivers

In fact, you can **DRIVE SCREWS AS FAST AS ONE A SECOND;** a tremendous gain over the old slow hand method—Any kind of screws; machine, wood, brass, self-tapping, sheet metal screws, standard heads, special heads.

No danger of marring heads or stripping threads—and all screws are driven to uniform tension . . . Hopper fed, no handling of screws is necessary. Thousands of manufacturers have adopted this modern method of speeding production—You, too, should get further details. There is a Detroit Power Screwdriver to fit your requirements.

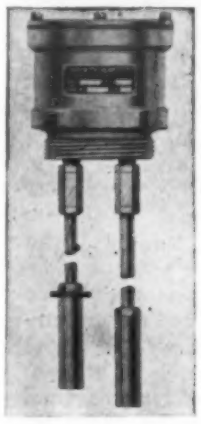
Our new catalog is just off the press—

Mail Coupon for Catalog

DETROIT POWER SCREWDRIVER CO.
2819 WEST FORT ST., DETROIT 16, MICHIGAN
Yes, send along your new catalog . . . sounds interesting.
COMPANY NAME _____
BY _____
STREET ADDRESS _____
CITY _____ STATE _____

For more details circle NED-5738 on enclosed inquiry slip

LIQUID LEVEL CONTROL is unaffected by foam on liquid



Suitable for controlling level of such liquids as water, milk, beer, acids, bases and salts, type 10CB1 general purpose control utilizes stainless steel probe for contacting liquid. Probe circuit is designed so that selection can be made upon installation from four sensitivity ranges. When probe circuit has been selected, control is not affected by saturated vapor above liquid in closed tank. Supplied as standard with either NEMA No. 3 weather-resistant or NEMA No. 4 watertight housing, control consists of electrical relay operating from probe circuit through transformer and rectifier. Made by **Photoswitch Inc.,** 77-89 Broadway, Cambridge 42, Mass.

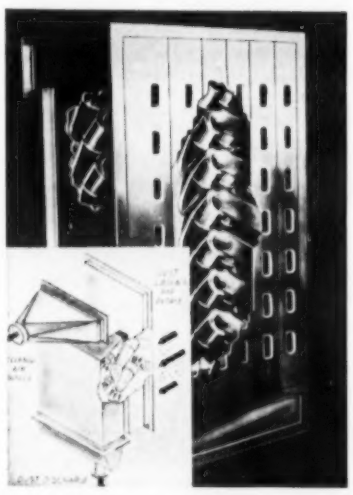
For more details circle NED-5739 on enclosed inquiry slip

REPLACEMENT MOTOR BRUSHES employ visual indicator line

Interchangeable with older types of similar size, Line-O-Life motor brushes are in all respects alike except for addition of visual indicator line impressed across top of brush at point indicating full service life. When worn down to this mark, brushes should be replaced; otherwise poor commutation will result. Made by **Carter Motor Co.,** 2660 N. Maplewood Ave., Chicago 47, Ill.

For more details circle NED-5740 on enclosed inquiry slip

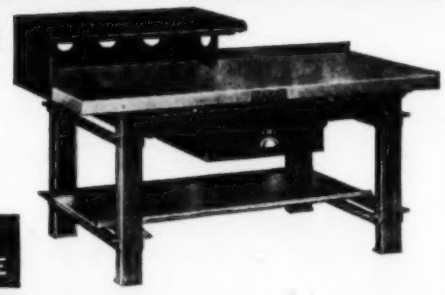
DUST COLLECTORS are of multiple cyclone type



Constructed without moving components or filters, Dustex dust collectors return cleaned air to working areas. Parallel 5-in. diameter tubes are readily adaptable to variation of assemblies, and unit can incorporate hinge arrangement to allow for quick opening. Design of inlet and internal air passage prevents build-up and plugging in handling of sticky or fibrous materials. Units are manufactured in stainless steel, aluminum, carbon steel, abrasive-resistant steel and other alloys. Applications include recovery of fly ash, lime dust, chemical processing dust, abrasive and food processing dusts and liquid mists. Made by **Dustex Corp.,** 1758 Walden Ave., Buffalo 21, N. Y.

For more details circle NED-5741 on enclosed inquiry slip

The Experts Choose CHALLENGE WORK BENCHES



Four Sizes
28 Inches Wide by 4, 5, 6 or 7 feet long. Top 2 Inches Thick.

BECAUSE THEY HAVE

1. Heavily ribbed, smoothly machined unyielding cast iron top.
2. Table equipped with lock-leveling screws.
3. Sturdy, steel welded base with large steel shelf.
4. Steel tool box shelf supported clear of bench top.
5. Steel guard rail at back.
6. Steel drawer with lock.
7. Portability.

Challenge
THE CHALLENGE MACHINERY CO.
GRAND HAVEN, MICHIGAN

For more details circle NED-5742 on enclosed inquiry slip

IN WIRE-MESH PRODUCTS LET JELLIFF DO IT!

For 70 years we've been weaving Wire Mesh. And a good part of that time we have also been making things of Wire Mesh for people who find it is cheaper, easier and generally more satisfactory to "let Jelliff do it."

From big Dipping Baskets to tiny precision filters — from fuel strainers to what-is-it gadgets — JELLIFF's Custom Production Department turns out fabricated Wire-Mesh products at speed, price and precision that mean lower costs and a stronger competitive position for our many customers.

If you buy or make wire-mesh assemblies as components of your own products and have not yet had an estimate from Jelliff, write today for details. No obligation, even if you enclose a blueprint for us to figure on. Address Department 12.

THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS · LEKTROMESH · RESISTANCE WIRE
WIRE MESH PARTS · WIRE CLOTH · STRAINERS • FILTERS
SOUTHPORT CONNECTICUT
WIRE PRODUCTS Jelliff SINCE 1860

For more details circle NED-5743 on enclosed inquiry slip

YOU CAN BE SURE.. IF IT'S Westinghouse

18 YEARS OF UPS AND DOWNS but never "DOWN" once

A Westinghouse Motor and Speed Reducer pulls this car up and down the Duquesne Incline of Pittsburgh, Pa., at 5-minute intervals every day from 5:00 AM to 1:30 AM.

For 18 years, this speed reducer has required no service whatsoever other than an occasional lubrication check.

Service records such as this are routine for Westinghouse Speed Reducers. Combine gears of tough "Taper-hardened" BP Gear Steel riding on roller bearings, with simple, positive lubrication and you get a speed reducer that doesn't know when to quit. For more information, write for bulletin DB-3700-SR, Westinghouse Electric Corporation, Dept. 68, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-07293

Westinghouse GEARED DRIVES

For more details circle NED-5744 on enclosed inquiry slip

POWERFUL VIBRATION SPEEDS FLOW OF BULK MATERIALS FROM BINS, HOPPERS, AND CHUTES

Rapid, hammer-like blows from CLEVELAND Type "F" vibrators assure a steady flow of material from bins, hoppers, and chutes of all types. These powerful vibrators are recommended for moving bulk sand, coal, lime, ore, cinders, slag, steel chips, cement, soda ash, etc.

Low-cost, dependable Type "F" air vibrators are available from stock in six standard sizes for attachment to bins and hoppers having capacities from one to several hundred tons.

CLEVELAND Type "F" vibrators operate at maximum efficiency regardless of mounting position. They are designed for continuous or intermittent operation and engineered for long service life.

WRITE FOR COMPLETE CATALOG AND PRICE LIST.

CLEVELAND VIBRATOR CO.
2745 Clinton Avenue
CLEVELAND 13, OHIO

For more details circle NED-5745 on enclosed inquiry slip

AHLBERG

BALL BEARINGS
ROLLER BEARINGS
THRUST BEARINGS AND
BALL BEARING HOUSINGS

Single Row · Pillow Block · Double Row · Take-up Unit · Self-Aligning · Flange Unit

Engineered to the Bearing Industry's Highest Standards of Uniformity, Quality and Performance

AHLBERG BEARING COMPANY
3025 WEST 47TH STREET, CHICAGO 32, ILLINOIS • DISTRIBUTORS IN ALL PRINCIPAL INDUSTRIAL AREAS
PRECISION CRAFTSMEN SINCE 1908

For more details circle NED-5746 on enclosed inquiry slip

BETTER 2 VITAL WAYS

1. Better Drawing
2. Better Printing

Ageproof VELLUM

Make this test yourself and KNOW you're right

A simple test will prove to you that AGEPROOF VELLUM combines the perfect drawing surface with perfect reproduction. You can repeatedly erase on AGEPROOF VELLUM without troublesome ghosts in prints, and redraw without feathered lines if you are using ink. You can put AGEPROOF into the files, or into active use for year after year, and your tracings will never turn yellow, become brittle, or lose their super-transparency.

AGEPROOF is a fully plasticized sheet, with the transparentizing agent permeating every fibre. AGEPROOF contains no wax, oil or grease to deteriorate. Test AGEPROOF VELLUM with a hard pencil. Hard pencil drawings on AGEPROOF print sharp and clear, avoid the mess of soft pencil smudging.

EUGENE DIETZGEN CO. • Chicago • New York • San Francisco
New Orleans • Los Angeles • Pittsburgh • Washington
Philadelphia • Milwaukee. *Dealers in All Principal Cities.*

FREE SAMPLES

Test AGEPROOF VELLUM! Draw on it with pen and pencil, erase, redraw, make test prints. Write on your company letterhead for samples, sent free.

DIETZGEN
DRAFTING, SURVEYING & PRINT-MAKING MATERIALS, INSTRUMENTS & EQUIPMENT

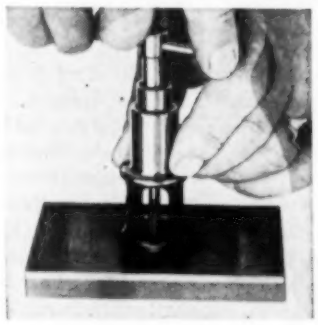
For more details circle NED-5747 on enclosed inquiry slip

NONCORRODING STAPLE
fastens copper and brass tubing

Designed to fasten tubing used in radiant heating, hot and cold water service lines and refrigeration installations, Tube-Tite staples can be obtained to fit ⅜, ½ or ¾-in. nominal tubing. Flat top staple shown is supplied to fit first two sizes, and round-wire round top style is for largest size. Solid copper surface of staples insures against galvanic action between it and copper or brass tubing. Steel core assures strength for driving and holding. Made by **E. H. Titchener & Co.,** 79 Clinton St., Binghamton, N. Y.

For more details circle NED-5748 on enclosed inquiry slip

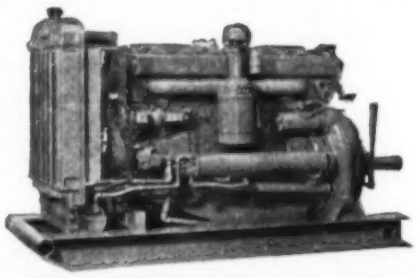
TAP & REAMER ALIGNER
aids hand-finishing of metal holes



Designed to provide quick method for holding and guiding tool accurately in hand tapping and reaming operations, this tap and reamer aligning tool acts as jig or bushing. Close-grained cast iron sleeve and base are precision ground for correct alignment, and barrel is finish ground for precision sliding fit with sleeve. Aligner is furnished in three sizes to accommodate tool shanks from 1/16 to 5/16-in. square. Made by **Forest City Bit & Tool Co.,** 1213 Kishwaukee St., Rockford, Ill.

For more details circle NED-5749 on enclosed inquiry slip

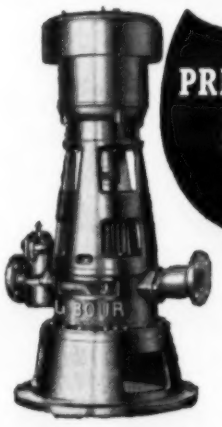
DUAL-FUEL ENGINE
burns natural gas or diesel oil



Operation on desired fuel is insured by merely positioning lever on heavy-duty engines, power units and generator sets. Utilizing high compression combustion, they have long life and minimum fuel consumption. Gas is fed to engine through air cleaner and intake manifold at substantially zero pressure. Vacuum of engine delivers full charge of air every intake stroke, and hydraulic governor controlled gas valve admits correct amount of gas to deliver required horsepower.

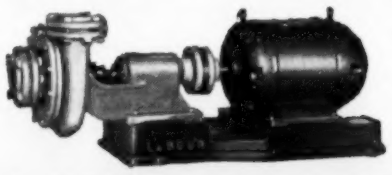
Ignition is accomplished by injecting pilot diesel fuel into cylinder. Heat of compression ignites pilot fuel which immediately ignites gas-air mixture. Three models are rated from 135 to 180 hp. Made by **Murphy Diesel Co.,** 5317 W. Burnham St., Milwaukee 14, Wis.

For more details circle NED-5750 on enclosed inquiry slip



PRIMING and NON-PRIMING
CENTRIFUGAL ACID PUMPS

Capacities 10 G.P.M. and up. Materials available to resist corrosion by nearly all acids and caustics. Handle air or vapor with liquid when necessary, also small solids in suspension. Simple, dependable. Write for details, stating your problem: kind of liquid, temperatures, capacity, pressure and suction lift.



THE LABOUR COMPANY, Inc.
1573 Sterling Avenue Elkhart, Indiana, U. S. A.

For more details circle NED-5751 on enclosed inquiry slip

Now you can fasten V-belts by using

ALLIGATOR
V-BELT FASTENERS

● Alligator V-belt Fasteners and the open-end V-belting now being made by belting manufacturers, will enable you to make up multiple V-belt drives from roll belting. These fasteners have been on the market 9 years and are now being used on a wide variety of drives.

Available for B, C, D sizes of belt for industrial use and 1-in. and 2-in. sizes for railroad use. These fasteners, however, should not be used for repairing endless cord V-belts.

Bulletin V-205 will give you complete details as to where and how these fasteners are used, sizes, list prices, tools and application instructions. A copy will be mailed at your request.

Order from your supply house

FLEXIBLE STEEL LACING COMPANY
4664 Lexington Street, Chicago 44, Illinois

Also sole manufacturers of Alligator Steel Belt Lacing for flat transmission belts and Flexco HD Belt Fasteners and Rip Plates for fastening and repairing conveyor belts.

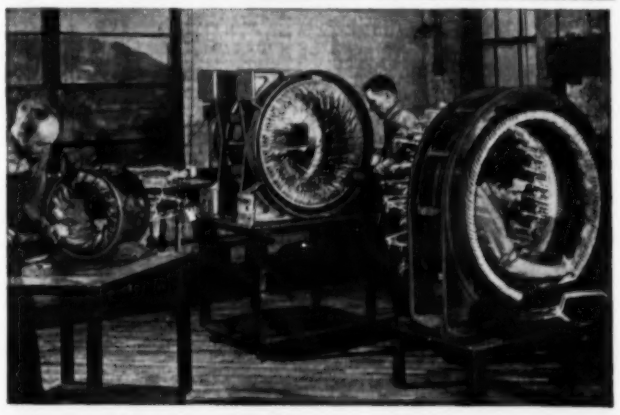
For more details circle NED-5752 on enclosed inquiry slip

FOOT-SAFETY IN EVERY FOOT!
A.W. SUPER-DIAMOND FLOOR PLATE
Puts Safety Where Accidents Begin

This 16-page Catalog tells all about A.W. Super-Diamond Floor Plates. Send for your free copy today.
Ask for Catalog L-35

A.W. SUPER-DIAMOND
FLOOR PLATES THAT GRIP
A PRODUCT OF
ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

For more details circle NED-5753 on enclosed inquiry slip



Rx for Ailing Motors –
DEPEND ON REPAIR SERVICE LIKE THIS!

A MIDWEST UTILITY recently learned what Allis-Chalmers Certified Service really means! When a vital 75 hp motor had an insulation failure, Chicago Electric, an A-C Certified Service Shop was called. In just 5 hours, the motor was completely repaired and back on the line!

You get this kind of service from over 80 A-C Certified Service Shops in every major industrial area . . . service that meets factory standards in quality parts and workmanship. For *new* motors or controls, too, see your nearest A-C Certified Service Shop or Authorized Dealer.

A-3059

ALLIS-CHALMERS, 918A SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS

For more details circle NED-5754 on enclosed inquiry slip

Holes drilled in Sparger Pipes wear rapidly due to a combination of high steam velocities and corrosion. When wear occurs, the Sparger Pipe must be replaced. With SK SPARGER NOZZLES, you replace the nozzle, NOT the pipe—and save money. SK SPARGER NOZZLES are inexpensive, simple to install or replace. In operation, they *mix* the steam with the liquid giving uniform temperature by means of agitation throughout the tank. In a 100 gallon tank, one nozzle, using 183 lb. of steam per hour at 40 psi gauge, will circulate 20 gpm of water and will raise the temperature of the tank water 40° F. in 11 minutes. Operation is quiet.

For complete information, send for Bulletin 3-A.

SCHUTTE AND KOERTING CO.
1177 THOMPSON STREET • PHILADELPHIA 22, PA.

For more details circle NED-5757 on enclosed inquiry slip

Write for Catalog OF USES and SPECIFICATIONS

GENERAL Industrial Pneumatics

ADD THESE 6 SELLING POINTS TO YOUR PRODUCT

SAVE
• TIME • LABOR
• FLOORS

REDUCE
• BREAKAGE
• MAINTENANCE
• COSTS

Available in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 23"—200 to 2000 lbs. cap. for low or high speeds.

Rigid **CASTER FORKS** *Swivel*

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

More AIR VOLUME • *More* STABILITY • *More* LOAD CAPACITY
DELIVERS *Long Mileage* IN HI-SPEED SERVICE

SEND FOR CATALOG... DEPT. 4
THE GENERAL TIRE & RUBBER CO. AKRON, OHIO

For more details circle NED-5758 on enclosed inquiry slip

CARTRIDGE PACKING ASSEMBLY for reciprocating or rotary motion

Consisting of specified number of lip-type seal rings separated and supported by steel thrust spacers and all permanently cemented together, this cartridge packing assembly can be obtained as integral or split type unit. It is suitable for positive sealing of fluids, and soft flexible sealing lips are not subject to deformation since all pressure imposed on assembly is transmitted and absorbed by solid outer portion of cartridge. Center insert of illustration shows typical cartridge used for reciprocating motion, while lower insert depicts split type used to facilitate installation. Made by **Emsco Derrick & Equipment Co.**, Cartridge Packing Div., 6800 S. Alameda St., Los Angeles 54, Calif.

For more details circle NED-5759 on enclosed inquiry slip

STEEL DRUM FAUCET can be held open mechanically

Of full-flow self-closing lock type, this No. 30 steel drum faucet is of close-grained gray iron and has brass sliding valve. No washers are required since metal-to-metal seat is used. Faucet is recommended for oils, kerosene, gasoline, turpentine, alcohol and anti-freezes. Finished in baked aluminum, it can be obtained in ¾-in. size style E for U. S. Standard outside pipe thread or as ¾-in. style D for U. S. Standard straight thread with locknut and gasket at $13.50 and $15.70 per dozen, respectively. Made by **Syracuse Stamping Co.**, 1030 S. Clinton St., Syracuse 4, N. Y.

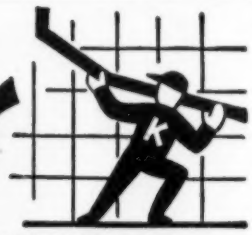
For more details circle NED-5760 on enclosed inquiry slip

TAPE RECORDER is dictation-transcription type

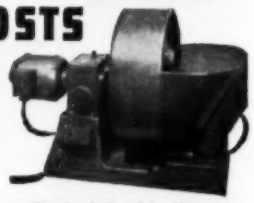
It is possible to record average full day's dictation or up to 2-hour continuous conference with this Magnematic tape recorder using one standard 7-in. reel of tape. Unit contains built-in loudspeaker in addition to earphone jack. Amplifier is capable of 5-w output enabling executive to record talk and have it played back before large group. Control box, supplied with unit, is fastened to typewriter that contains buttons for start-stop and backspacing and indexer which permits rapid location of any tape section. Made by **Amplifier Corp. of America**, Magnematic Div., 398-15 Broadway, New York 13, N. Y.

For more details circle NED-5761 on enclosed inquiry slip

Lower



PRODUCTION COSTS WITH *KRAUS* AUTOMATIC HOPPERS



Typical Tumble Hopper

USE THEM FOR...
1. Machining
2. Assembling
3. Packaging
4. Sorting

VERSATILITY. Basic hoppers can be tooled for a wide variety of pieces.

LARGE CAPACITY. Up to 2.4 cu. ft. on 32" tumble type. Eliminates frequent reloading and saves labor.

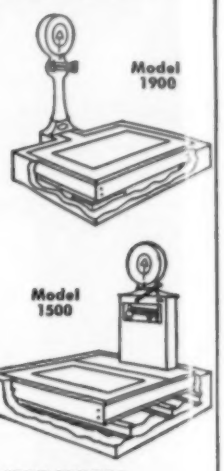
Send samples with delivery rate and orientation requirements to:

KRAUS DESIGN INC.
946 EXCHANGE ST. • ROCHESTER 8, N. Y.

For more details circle NED-5762 on enclosed inquiry slip

TOLEDO FLOOR SCALES

help you Save Time . . . CUT COSTS!



Toledo Floor Scales are speedy, accurate, dependable . . . provide vital cost-data on materials and products in receiving, shipping and processing. Double parallel link platform suspension assures long life, dependable accuracy. Model 1900 for medium capacities. Model 1500 for capacities to 6500 lb. Write for bulletin 2410. Toledo Scale Company, Toledo 1, Ohio.

STOP ERRORS

Toledo Printweigh provides printed weight records...available on all types of Toledo Dial Scales...assures you that accurate indication of the Toledo dial will reach your accounting records without chance of human error.

TOLEDO

HEADQUARTERS FOR SCALES

For more details circle NED-5763 on enclosed inquiry slip

• This illustrated booklet shows how Invincible Units are saving money by efficiently salvaging unfused flux on submerged arc welding jobs. Invincibles operate more rapidly and far better than any manual method. Also, by eliminating fine dust ("flour") from the salvaged flux, they reduce welding rejects. Invincible Units are compact, easily installed and able to withstand continuous operation.

Send for your copy of this booklet now!

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

For more details circle NED-5764 on enclosed inquiry slip

If you operate hand-fed drill presses in your plant you can usually cut costs 25-30% or more by equipping them with Bellows "Controlled-Air-Power" Feeds.

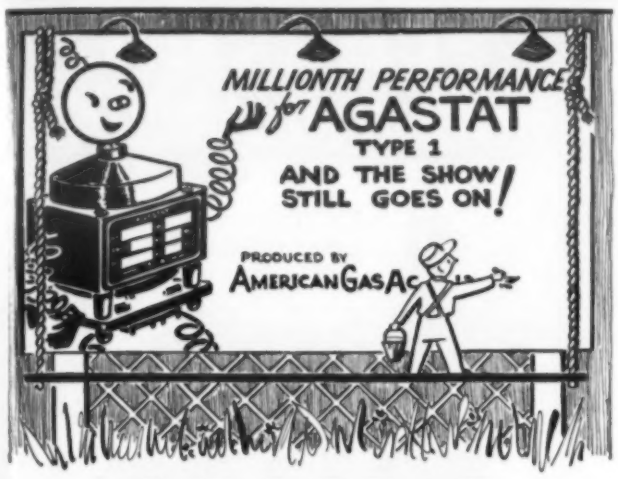
Easily and quickly installed on the star wheel shaft of any standard drill press. Feeds spindle with perfectly controlled thrust and feeding rate; eliminates operator fatigue, maintains uniform high production throughout entire shift; cuts drill breakage, lengthens drill life. Write for Bulletin DF-105-R Today.

Dept. NED 850

The Bellows Co.
AKRON, OHIO

CONTROLLED-AIR-POWER FOR FASTER, SAFER, BETTER, AND LOWER-COST PRODUCTION

For more details circle NED-5765 on enclosed inquiry slip



AGASTAT
TIME DELAY RELAY

The magnetic circuit of an AGASTAT makes it a dependable, efficient instrument.

Time delay with the basic type 1 starts when the coil is energized.

Catalog and information on request.

A'G'A AIRPORT LIGHTING · A'G'A STIMSONITE REFLECTORS · A'G'A MARINE LIGHTING EQUIPMENT · A'G'A AGASTAT TIME DELAY RELAYS

AMERICAN GAS ACCUMULATOR COMPANY
1027 NEWARK AVENUE • ELIZABETH 3, N. J.

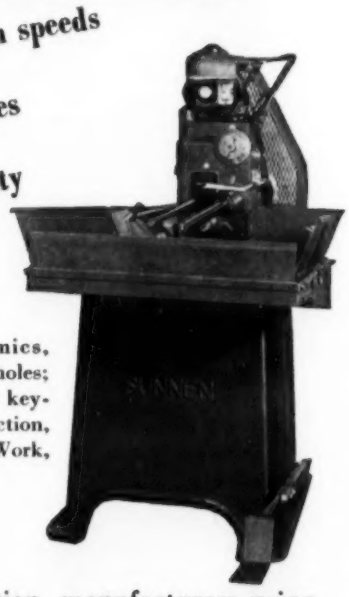
For more details circle **NED-5766** on enclosed inquiry slip

HOLES MADE TO ORDER

From simple deburring to exact sizing and finishing,

New Model Sunnen Honing Machine Cuts Production Costs

- Higher production speeds
- Instant set-up
- No jigs or fixtures
- Heavier loads
- Greater flexibility
- Longer life



Hones metals, ceramics, glass; open and blind holes; holes with ports, lands, keyways. Ideal for Production, Salvage, Tool and Die Work, Maintenance.

Without an exception, manufacturers using Sunnen Honing have found that their own products run faster and quieter, perform better, last longer with Sunnen Honed bearings and cylinders. That's because they get just the right surface finish and the exact dimensional tolerance required.

And now Sunnen Honing is easier and faster than ever. Recent improvements speed up loading and unloading . . . provide smooth, vibrationless operation . . . increase operator efficiency. Diameter range, .120" to 5.5"; dimensional accuracy guaranteed to .0001"; surface finish to 2 micro-inches RMS in hardened steel. Average installation costs less than $1,000. Investigate now—Sunnen Honing may be your answer, too! Write for details of the new Model MBB Honing Machine.

SUNNEN PRODUCTS COMPANY
7923 Manchester Ave., St. Louis 17, Missouri
Canadian Factory: Chatham, Ontario

-520

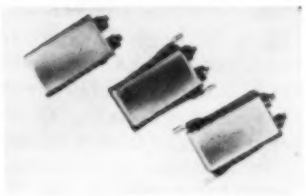
For more details circle **NED-5767** on enclosed inquiry slip

AIR REGULATOR-CLEANER
filters, lubricates and controls

This redesigned air regulator-filter-lubricator unit incorporates piston-type regulator, pressure gage, lubricator and synthetic-type filtering element. Filter cover and regulating valve screw into main body of unit. Measuring 6-in. sq x 4¾ in. deep, it is installed in air intake line from main air line and can be mounted on central control panel. Two knobs on front panel provide means for accurate regulation of air pressure and amount of oil injected as required by individual job. Third knob drains water trap. Indicators afford visibility of air pressure and oil level. Made by **Logansport Machine Co.**, 908 Center Ave., Logansport, Ind.

For more details circle **NED-5768** on enclosed inquiry slip

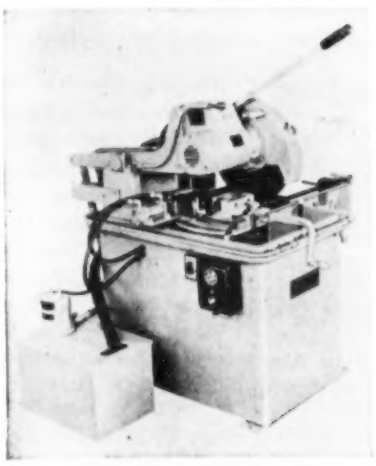
CAPACITOR
has zero temperature coefficient



By combining matched capacitor elements in single container, Plasticon capacitors can be supplied with temperature coefficients from −1000 to 1000 ppm per degree Centigrade. Designed for 400-cycle operation, they can be furnished for 330-v ac and higher with capacitances from 0.01-mfd and up. Made by **Condenser Products Co.**, 1373 N. Branch St., Chicago 22, Ill.

For more details circle **NED-5769** on enclosed inquiry slip

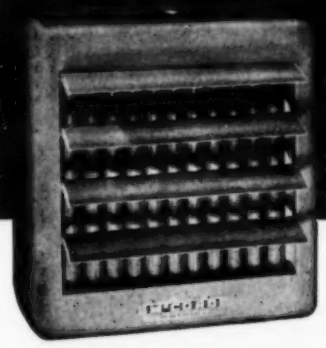
METAL CUT-OFF MACHINE
is fully equipped for wet cutting



Supplied with recirculating pump, tank, hose connections and removable splash guards, this Swing-Cut metal cut-off machine utilizes action of cutting head to control flow of cutting fluid. Improved method of adjusting depth of cut has been added in form of wheel depth control arm operated from operator's normal position. Other features include adjustable work stop that can be used for cutting of multiple pieces up to 24 in. long and movable splash guards for protection when cutting at angles. Machine can be equipped also with air-activated self-centering vise either hand or foot controlled. Made by **Stone Machinery Co.**, 524 Fayette St., Manlius, N. Y.

For more details circle **NED-5770** on enclosed inquiry slip

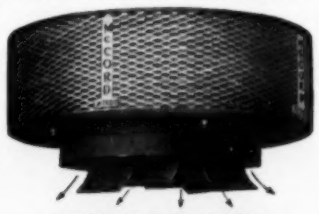
Better Heat Distribution WITH McCORD Unit Heaters



HORIZONTAL TYPE HEATER

More Heat . . . Better Distribution

More heat, better distribution is the answer to any heating problem. McCord, because there is a model and type to meet each particular condition, will do a better heating job. Every improvement that engineers and the experience of many users could suggest is incorporated in the improved models of McCord Unit Heaters. Due to the design and careful attention to balance a new degree of quietness has been attained. The scientifically designed spiral fin tube heating surface provides maximum heat transfer capacity.

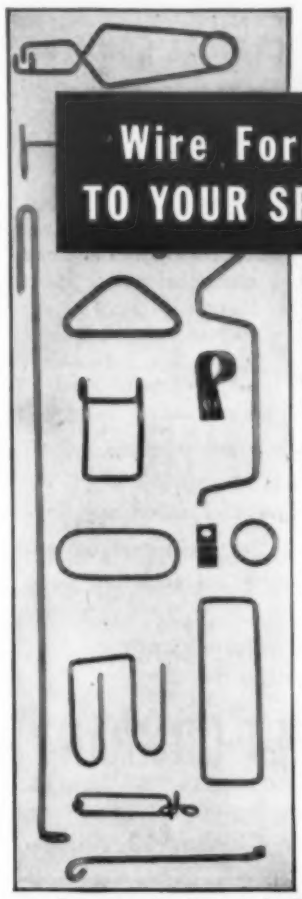


VERTICAL TYPE HEATER

McCORD CORPORATION
2580 E. Grand Blvd.
Detroit, Mich.

Specify McCORD ON YOUR NEXT JOB

For more details circle **NED-5771** on enclosed inquiry slip



Wire Forms Finished TO YOUR SPECIFICATIONS

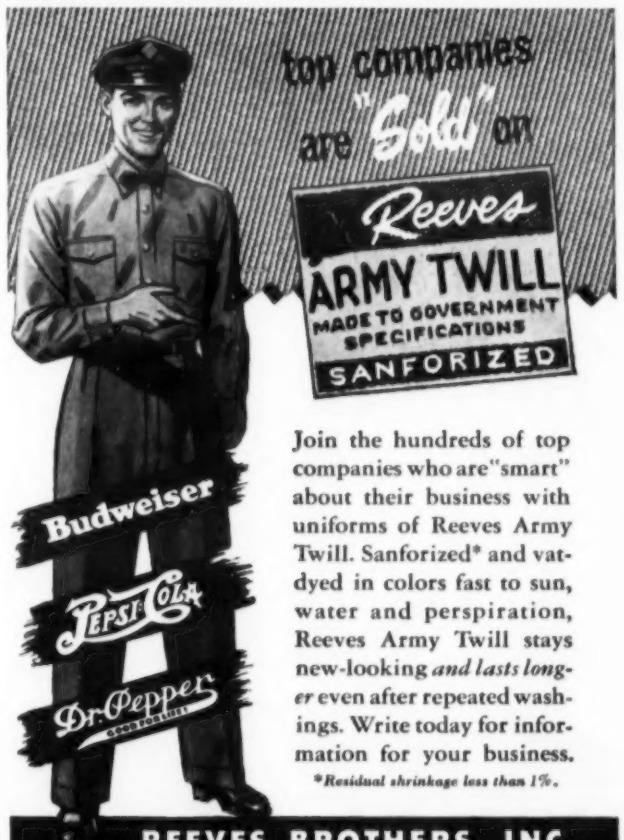
● Now, Sommer is equipped to handle *your* wire forms—in a wide variety of attractive finishes.

We have installed fast, automatic nickel-plating equipment for either large or small assemblies. Also, if you want cadmium or zinc plating, bonderized enamel, parkerized or copper-coated finishes—you can count on Sommer.

Complete forming, stamping, cut-threading and butt-welding of light metal parts are also among our services. Whatever your problem, you can save time and money if Sommer handles the *complete* job. Just send sample, blueprint or drawing.

SOMMER METALCRAFT CORPORATION
(Formerly JESCHKE Wire and Specialty Company)
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

For more details circle **NED-5772** on enclosed inquiry slip



Join the hundreds of top companies who are "smart" about their business with uniforms of Reeves Army Twill. Sanforized* and vat-dyed in colors fast to sun, water and perspiration, Reeves Army Twill stays new-looking *and lasts longer* even after repeated washings. Write today for information for your business.

**Residual shrinkage less than 1%.*

REEVES BROTHERS, INC.
54 WORTH ST., NEW YORK 13, N. Y.

For more details circle **NED-5773** on enclosed inquiry slip

...NEW! AMERICAN "PAK-IT" Hand Truck

The "PAK-IT" is designed to meet the need for a sturdy, lightweight hand truck that will move up to 50-inch high loads with greatest efficiency. Rolls smoothly, quietly, easily through tightest spots in plant, store, on platform or motor truck. "PAK-IT" gives you 5 new American features.

The American Pulley Company
4294 WISSAHICKON AVE., PHILADELPHIA 29, PA.

Please mail free American "Pak-It" Truck Catalog

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ( ), STATE _____

For more details circle **NED-5774** on enclosed inquiry slip

A RECORDING MECHANICAL COUNTER

Actuated by an Electrical Impulse

it operates on the output of a scaler, photo tube, or other electrical unit . . permanently records counts on a 2¼" tape . . . automatically resets to zero.

In Radioactive Research it saves precious time by eliminating many hours of manual labor, resulting in greater economy and efficiency.

In industry it maintains a permanent record automatically, recording production and time each hour.

Write for complete information and illustrated circular S C 15

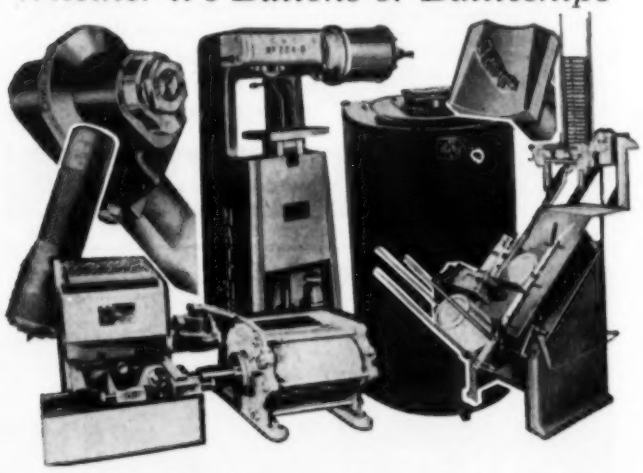
STREETER-AMET COMPANY
AUTOMATIC WEIGHT RECORDERS & SCALES
HIGH SPEED COUNTERS SINCE 1888
4101 Ravenswood Ave., Chicago 13, Illinois

For more details circle NED-5775 on enclosed inquiry slip

The Best Mark

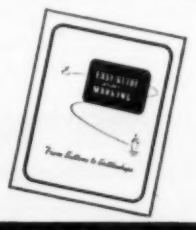
FOR METAL WOOD PLASTIC GLASS CERAMIC FIBRE
Parts or Surfaces

Whether it's Buttons or Battleships



There's a Matthews marking machine or tool engineered to apply the BEST MARK to your product. Your name, trademark, patent numbers, description of contents, codings, ornamentation and other important data, whether your product is round, flat or contoured, can be legibly and accurately marked by a Matthews marking unit . . . at rates of production you'll enjoy

Send for your copy of our latest illustrated Bulletin LI-M, "From Buttons to Battleships."

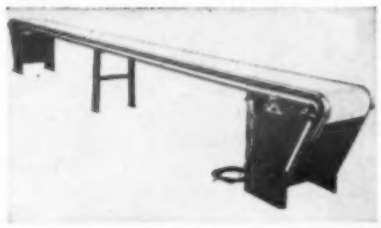


JAS. H. MATTHEWS & CO.
3943 FORBES ST., PITTSBURGH 13, PA.
NEW YORK BOSTON PHILADELPHIA CHICAGO
NEWARK SYRACUSE CLEVELAND CINCINNATI
DALLAS BIRMINGHAM LOS ANGELES

For more details circle NED-5776 on enclosed inquiry slip

BELT CONVEYOR

features interchangeable bed types



Assembled from stock parts and units to specifications, Flo-table belt conveyor can be installed for either horizontal or floor-to-floor conveying. Slide, roller, line roll and troughing types of beds are available and can be interchanged to handle different products. Standard belt widths from 6 to 36 in. and lengths to over 100 ft are offered. Conveyors can be floor mounted 18 to 37 in. high or ceiling suspended. All parts are of pressed steel and drive and takeup are enclosed in housing. Made by **Mar-rail Conveyor Co.,** 565 York Ave., Pawtucket, R. I.

For more details circle NED-5777 on enclosed inquiry slip

ROTARY INDEXING TABLE

16-in. unit is optically controlled

Optical control of OPL model 16 rotary indexing table enables angular settings in degrees, minutes and seconds to be made from master graduated reference drum. Latter is enclosed inside table and solidly mounted to rotating platen. Spindle runout is held to within 0.0002-in. and maximum error of indexing will not exceed 0.005-in. measured at periphery of 16-in. diameter platen. Declutching mechanism is provided for two-speed platen drive. Made by **F. T. Griswold Mfg. Co.,** 0305 W. Lancaster Ave., Wayne, Pa.

For more details circle NED-5778 on enclosed inquiry slip

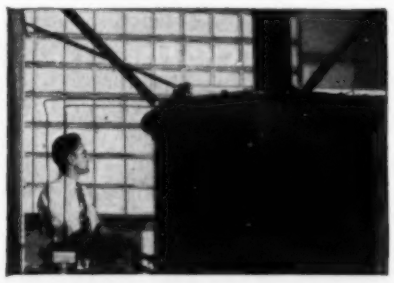
CARD RECORD DESK

used easily from seated position

Lower, wider and deeper than previous models, Super-Carder card record desk has eight drawers for filing five rows of 5 x 3-in., ten rows of 2½ x 3-in. and three rows of tabulating cards. If preferred, it can be furnished with five drawers for filing four rows of 6 x 4-in. cards, three rows of 8 x 5-in. cards and six rows of microfilm.

Fitting in sloping trays, cards slant to rear and have 2-inch angle spread at top. Two-position front plate compressor facilitates tabulating cards, and posting table moves back and forth easily. It can be attached between two cabinets or furnished with legs on one side. Cabinets can be grouped in various positions. Made by **General Fireproofing Co.,** Dept. NE, Dennick Ave., Youngstown 1, O.

For more details circle NED-5779 on enclosed inquiry slip



High Voltage Transformer for Testing Dielectric Strength—as seen in National's Research Laboratories

National's Continuous Research —*the answer to your* Improved Profitable Products

National, not only carries on a continuing quality control program in the manufacture of National Vulcanized Fibre and Phenolite to assure adherence to rigid specifications, but, is constantly seeking improvements in these products for the advancement of industries where plastics practically perform.

It will pay you to use—

NATIONAL VULCANIZED FIBRE

A tough, horn-like material with high dielectric and mechanical strength. Excellent machinability and forming qualities, great resistance to wear and abrasion, long life, light weight. Sheets, Rods, Tubes, Special Shapes.

PHENOLITE Laminated PLASTIC

About one-half the weight of aluminum, possesses an unusual combination of properties—a good electrical insulator, great mechanical strength, high resistance to moisture; ready machinability. Sheets, Rods, Tubes, Special Shapes.

National Research and Engineering Service are available to you, without obligation—to help you solve your specific development problem. Write us—

NATIONAL VULCANIZED FIBRE CO.
WILMINGTON, DELAWARE Since 1873 Offices in Principal Cities

For more details circle NED-5780 on enclosed inquiry slip

SCHRAMM *Pneumatractor*

Pneumajack

SCHRAMM *Pneumatractor* equipped with either D-45 or D-55 Rock Drill. Can also be furnished with PNEUMATAMP—(Two) BT-32 Backfill Tampers or PNEUMABREAKER—B-80 Paving Breaker. Handy combinations for plant maintenance and general construction work.

Write for Bulletin PPJ-50

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

For more details circle NED-5781 on enclosed inquiry slip

PRODUCTION CURVES ARE RISING...

...at AMERICAN'S New Plant at WILLIMANTIC

Acres of the newest and fastest automatic machines are steadily boosting the production curves of both American Phillips and Slotted Fasteners.

This modern, streamlined plant will soon be one of the top-production units of the screw industry . . . deliveries expedited by national distribution which is now geared up to greater efficiency than ever before.

Willimantic production and shipments will be supplemented by our Norristown, Pennsylvania, plant and Chicago warehouse.

AMERICAN SCREW COMPANY
Plants at Willimantic, Conn. and Norristown, Pa.

AMERICAN SCREWS

For more details circle NED-5782 on enclosed inquiry slip

A VACUUM OR PRESSURE PUMP

*Motoair**

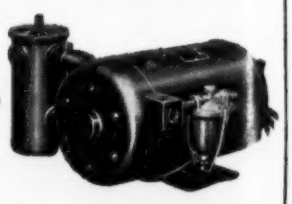
designed to fit into machines which require accessory power, *without* taking additional space!

REQUIRES LESS SPACE • LESS PARTS TO WEAR OUT • NO GEARS • NO HINGED BLADES • NO BELTS • NO DRIVES

Try this compact unit for top satisfactory service . . .

operates equally well with floor, wall or ceiling mountings. Available in a range of sizes for many different types of work.

Automatic, *visible* lubrication. Stands up under day-long usage; operates without pulsation; designed with motor and pump in ONE integral unit



*REG. U. S. Pat. Off. 811

Ask for Catalog details.
Get FACTS,—and you'll want Motoair!

NEW JERSEY MACHINE CORPORATION
1530 Willow Ave. • Hoboken, N. J.
Factory offices in Chicago, Cincinnati, Los Angeles

For more details circle NED-5783 on enclosed inquiry slip

THE MATEER ELECTRIC FILLER HANDLES THEM ALL!

LIQUIDS · OILS · POWDERS · PASTES

COMBINED LIQUIDS AND SOLIDS

1/500 oz. to 2 Pounds
20 to 70 Per Minute
Up to 750° F

SAVE TIME AND MONEY WITH THE MATEER ALL ELECTRIC FILLING HEAD

Totally enclosed, manual or automatic. Accuracy as close as ±½%. Synchronize this self contained filling head with existing production lines and processing systems.

Jacketed and electrically heated hoppers available for handling cold and hot materials up to 750° F. Hot waxes, insulating compounds and asphalts handled without difficulty.

Send full information and samples of material to be tested. Write Dept. 105 for fully illustrated bulletin.

G. DIEHL MATEER & CO.
Lincoln Highway • Devon, Pa.

For more details circle NED-5784 on enclosed inquiry slip

IS DEEP DRAWING HOT OR COLD?

Special seamless drawn tapered tube. Used as diffuser tube on steam jet type refrigeration unit.

The Hackney Deep Drawing Process consists of hot or cold cuppings from flat, circular sheets or plates. Cold drawing is then employed where it is necessary to obtain desired diameter and wall thickness. Required heat treatment is then added to provide needed physical characteristics in finished products.

It is this process which gives users of Hackney Shells many exclusive advantages: decreased overall weight, greater strength, faster production, elimination of expensive machining operations, greater durability, improved appearance, lower costs.

If you're interested in securing the Hackney Deep Drawing advantages for your product, *write us today for full details.*

PRESSED STEEL TANK COMPANY
Manufacturers of Hackney Products
Main Office and Plant: 1450 S. 66th St., Milwaukee 14
1324 Vanderbilt Concourse Bldg., New York 17 • 255 Hanna Bldg., Cleveland 15 • 936 W. Peachtree St., N. W., Room 136, Atlanta 3 • 208 S. LaSalle St., Room 779, Chicago 4 • 578 Roosevelt Bldg., Los Angeles 14

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

For more details circle NED-5785 on enclosed inquiry slip

Cut costs with the NEW ROTOR SCALER

For these jobs:

Weld slag removal — Scaling
Spatter cleaning — Star drilling
Weld peening — Light chipping

Call in the Rotor Analyst to demonstrate it on your work.

THE ROTOR TOOL CO.
CLEVELAND, OHIO

For more details circle NED-5786 on enclosed inquiry slip

DIE-CAST WHEELS
have high strength thin wall section

Illustrated rubber-tired lawnmower wheels are made of zinc diecastings riveted together. Two halves of each wheel are identical with each half having ring of integrally cast studs alternating with cored holes so positioned that studs of one half line up with holes of other. In assembly, studs are spun over and practically indestructible bond is formed. Die-cast wheels in various sizes can be furnished for wheelbarrows, dollies and wagons and will take any commercial electroplated or organic finish. Made by **J. R. Doyle Engineering Co.**, 526 Cherry St., Kansas City 6, Mo.

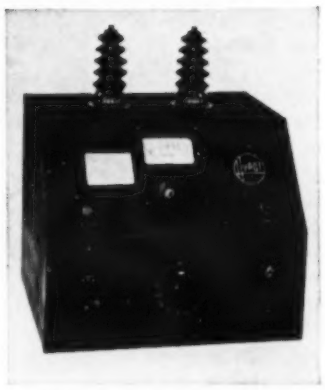
For more details circle NED-5787 on enclosed inquiry slip

HYDRAULIC PRESS
5-ton unit in bench and floor types

Integral manually-operated pressure unit of this 5-ton hydraulic press is removable and can be used in any mounting fixture. Operative in vertical or horizontal position, press is guarded against overload by internal relief valve and loads can be gage-recorded. Ram stroke length is 5 in. and bolster adjustment is 12 and 27 in. in increments of 3 in. on bench and floor models respectively. Made by **C. R. Brandt Machine Co.**, Dept. R, P. O. Box 147, York, Pa.

For more details circle NED-5788 on enclosed inquiry slip

INSULATION BREAKDOWN TESTER
is semiportable high potential type



Housed in steel sloping panel case measuring 20 x 16 x 16 in., 570 series Hypot high potential insulation breakdown tester has range up to 30,000 v ac and capacity up to 1.65 kva. Simple push-botton control in transformer primary is used to energize high potential output which is infinitely variable from zero to maximum rating. Breakdown or short circuit in equipment being tested trips high voltage cutout which has reset switch on panel. High voltage output terminates in stand-off insulators on top of instrument case, and voltmeter and test pilot light are located behind heavy glass for operating safety. Made by **Associated Research, Inc.**, 3755 W. Belmont Ave., Chicago 18, Ill.

For more details circle NED-5789 on enclosed inquiry slip

cut costs · clean efficiently

cold steam

✓no back splash
✓blasts stubborn dirt
✓harmless to finest finish

HYDRO-AIR PRESSURE WASHER $9.95

Connects to regular air and hot or cold water supply. Precise control of air and water blasts heavy dirt and grease or rinses sheets and small parts with a penetrating spray.

D & M Products, Inc., 26 N. Raymond Ave., Pasadena 1, Calif.

Order through your supplier or direct. The Hydro-Air washer will be sent post paid.

widely used in these industries:

Air Craft
Automotive
Bakeries
Breweries
Cement
Ceramics
Cheese
Construction
Distilling
Electrical
Food Processing
Foundries
Jewelry
Leather
Meat Packing
Machine Shops
Marine
Mining Equipment
Oil & Refinery
Optical
Paper
Pharmaceutical
Public Utilities
Repair Services
Railroad
Rubber
Ship Building
Stone Polishing
Textile
Tobacco
Transportation

For more details circle NED-5790 on enclosed inquiry slip

HERE'S HEAT THAT RESPONDS to your needs

WATLOW ELECTRIC CARTRIDGE UNITS

Accurately fit for burn-out resistance

These extremely compact heating cartridges are inserted into drilled and reamed holes in machine parts to be heated. The close fit made possible by their accurate diameters assures high productivity.

Watlow Cartridge Units are constructed for severe, continuous service. Brass, steel and nickel alloy sheaths—⅜" to 1 5/16" diameters—1½" to 20" lengths—rigid and flexible leads—densities 10W to 45W per square inch.

Send for the Watlow Electric Heating Units Catalog.

SPECIALISTS IN ELECTRIC HEATING UNITS

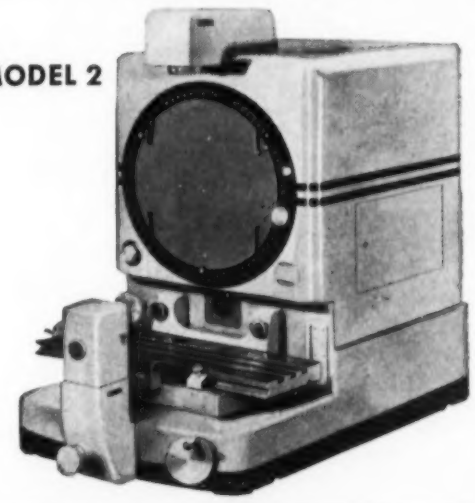
WATLOW
ELECTRIC MANUFACTURING COMPANY
1314 N. 23d St. St. Louis 6, Mo.

For more details circle NED-5791 on enclosed inquiry slip

Kodak *Announces the*

KODAK CONTOUR PROJECTOR

MODEL 2



the most versatile optical comparator you can buy

It handles large parts. There's 6¾ inches from lamp house to object and 8 inches from object to lens—*at all magnifications.* Front lamp house pivots to make room for long objects under surface illumination. Vertical travel is 4 inches.

It gives surface illumination in any of 5 planes, and switches instantly from surface illumination to silhouette projection, or to a combination of both. Instant dialing to any of 6 magnifications from 10× to 100× without distortion. The 14-inch screen is extra bright; no hoods or curtains needed —even in fully lighted rooms. Designed for all-day operator comfort, yet built to precise toolroom standards.

We'd like to show you how it can handle your own inspection problems.

EASTMAN KODAK COMPANY
Industrial Optical Sales Division
Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR SHOWS contours, of course surface details... deep, blind holes

Kodak

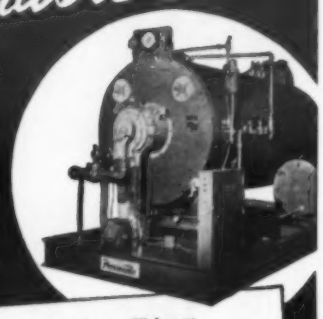
For more details circle NED-5792 on enclosed inquiry slip

ORR & SEMBOWER

Powermaster®

STEAM GENERATORS

High and low pressure units — 15 to 300 H.P. — for light oil, heavy oil, gas or combination gas-oil firing give you cost-cutting features like these . . .



- ✓ Low fuel consumption through high efficiency
- ✓ Packaged design saves excessive installation costs
- ✓ Automatic operation frees engineer for other duties
- ✓ Mounted on steel base — no bricking required
- ✓ Delivered fully wired and factory-tested
- ✓ A. S. M. E. constructed — U. L. approved
- ✓ Widespread service by factory-trained men

Get Catalog — Write

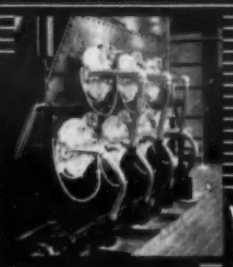
ORR & SEMBOWER, INC.

930 Morgantown Rd. • Reading, Pa.

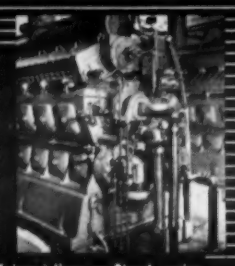
For more details circle NED-5795 on enclosed inquiry slip

GASES?

LIQUIDS?



Fuel lines in heating units



Exhaust lines on Diesel engine

You can handle them Better

Titeflex

All-Metal Flexible Tubing

If you use tubing to convey gases or liquids, you can do it better and at less cost with Titeflex. It's made in brass, bronze, stainless, monel and inconel, to solve all heat, pressure and corrosion problems. It's made in a complete range of sizes, and it's *all-metal*, with no packing to wear out. Write us for catalog describing Titeflex advantages in full.

Titeflex, Inc. 500 Frelinghuysen Avenue NEWARK 5, NEW JERSEY

TITEFLEX LASTS LONGER BECAUSE IT'S ALL-METAL

For more details circle NED-5796 on enclosed inquiry slip

THE

EMPLOYER'S

Best Friend

The mat that cuts breakage costs, prevents accidents, promotes sanitation, saves money . . . . .

AMERICAN COUNTER-TRED

IDEAL FOR USE

in shower stalls, kitchens, locker rooms, lavatories and around machinery where there is a minimum of oil.

Non-slip surface. Resiliency reduces fatigue. Exceptionally tough and long wearing under heaviest traffic. Made of cotton cord bound together with rubber compounds. Ridged bottom affords aeration and drainage. Rolls up for mopping of floor. ⅜ inch thick. 2 feet wide; any length in one-foot sections vulcanized together.

AMERICAN MAT CORPORATION

1733 Adams Street Toledo 2, Ohio

( ) Please send prices on American Counter-Tred Matting. Please send information on ( ) Ameriflex Flexible Wood Link Matting; ( ) Tuf-Tred Tire Fabric Matting; ( ) Neo-Cord Counter-Tred Safety Matting; ( ) Ezy-Rug Colored Rubber Link Matting; ( ) Tile-Top Sponge Matting; ( ) Traffic-Tred Matting;) Do-All All-Purpose Rubber and Cord Matting; ( ) Ever-Tred Vinyl Plastic Link Matting.

Name

Firm

Street

City & State

IN CANADA — OFFICES: American Mat Corporation, Ltd. Canada Trust Building, Windsor, Ontario FACTORY: West Lorne, Ontario

For more details circle NED-5797 on enclosed inquiry slip

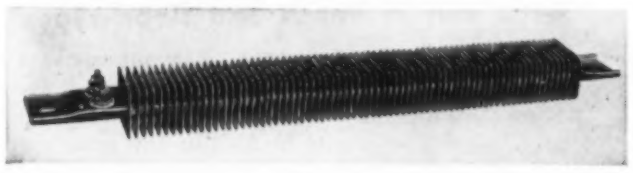
CONCRETE DRILL BITS in 3/16 to 7/16-in. size range

These centerless Konkrete Kore drill bits in smaller sizes can be used in standard portable electric drills operating at speeds from 500 to 1200 rpm. Since there is no center point to act as pivot and retard cutting, drills penetrate concrete readily with but little pressure. Made by **Tilden Tool Mfg. Co.,** Dept. NED, 1995 N. Fair Oaks, Pasadena 3, Calif.

For more details circle NED-5798 on enclosed inquiry slip

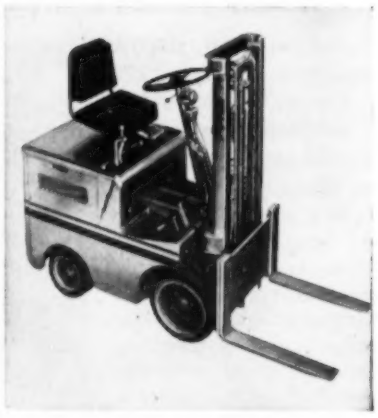
FINNED ELECTRIC STRIP HEATERS supplied in 15 standard lengths

Sheath of these finned electric strip heaters is one-piece rectangular tubing and is constructed so that all fins are in contact with surface of heating element to assure efficient heat transfer. Both sheath and fins are of rust-resisting steel. Heater coil is nickel chromium wire insulated from inner sheath wall. Heaters operate on 115 or 230 v ac and can be used where sheath temperatures will not exceed 750° F. Stock sizes range from 500-w unit with 10½-in. overall length and 7-in. finned length to 3250-w unit having 41½-in. overall length and 39-in. finned length. Made by **Vulcan Electric Co.,** Dept. P, 86-90 Holten St., Danvers, Mass.



For more details circle NED-5799 on enclosed inquiry slip

ELECTRIC FORK TRUCK separate motor powers lift pump



Even acceleration of motor on Trucloader electric battery powered 1000-lb fork lift truck is provided by automatic control of power through master switch which is governed by automatic timer. Control is non-plugging type, direction of travel cannot be changed until motor comes to full stop, and deadman brake is used. Lift heights are available in range from standard 84 in. with overall height of 61 in. to 130 in. and overall height of 84 in. Standard tires are demountable cushion type, but pneumatic and pressed-on solid tires can be obtained as optional choices. Made by **Clark Equipment Co.,** Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

For more details circle NED-5800 on enclosed inquiry slip

Touch it and it bleeds — OIL!

OIL-saturated felt bleeds at a touch, delivering oil where and as needed. This is an effect of oil storage capacity and capillary action, important qualities in felt wick lubrication and felt seals. Shown below is an OilFoil seal, a sandwich of two layers of felt and two impervious septums of Hycar, the whole firmly bonded. Such seals are made by American Felt to exact dimensions, and with one to three septums. They assure positive lubrication and retention of lubricant. For illustrative samples and complete technical information, write for Data Sheet No. 11, "Felt Seals, Their Design and Application". This is the authority on the subject.

American Felt Company

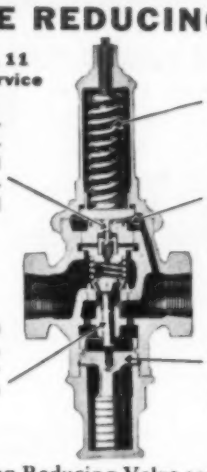
GENERAL OFFICES: 62 GLENVILLE RD. GLENVILLE, CONN.

For more details circle NED-5801 on enclosed inquiry slip

5 Quality Features

THAT ASSURE LOW COST PRESSURE REDUCING SERVICE

MASON NO. 11 for Steam Service



1. Carefully calibrated diaphragm spring insures accuracy throughout entire control range.
2. Stainless steel auxiliary valve unit, hardened and ground pilot valve — eliminates sticking and wire drawing.
3. Phosphor bronze diaphragm.
4. Special alloy stainless steel main valve, hardened and general, prevents steam cutting.
5. Bronze piston fitted with cast iron rings operates in ground and polished cylinder.

The No. 11 Mason Reducing Valve assures precise pressure control in all types of applications. Pilot operation assures fast, accurate response to controlled pressure variations. Initial pressure ranges up to 250 lbs. reduced to any desired pressure between 5 and 75 lbs. or 75 and 225 lbs. Bronze bodies, screwed connections in sizes ½" to 2". Iron bodies, 250 lb. flanges in sizes 2½" to 4". Maximum working pressure 250 lbs. @ 450°F.

Your local Mason-Neilan industrial distributor is ready to serve you from his stock

MASON-NEILAN REGULATOR COMPANY

1189 ADAMS STREET, BOSTON 24, MASS., U. S. A.

For more details circle NED-5802 on enclosed inquiry slip

GOOD WIND-ABILITY

GOOD WORKABILITY

are qualities found in Essex Extra-Test Magnet Wire

Essex Extra-Test Magnet Wire has the good windability and workability necessary for random or layer winding at any speed.

It slides evenly and smoothly in place; results in maximum turns in minimum space and in coils that pack tight.

When Essex Extra-Test is used for motor armatures its extra abrasion resistance reduces possibility of damage to insulating film, no matter how narrow the slots.

When you specify Essex Extra-Test Magnet Wire for layer winding you insure against broken wires, crossed turns, runbacks, spaced turns and frequent tension adjustments. Write for prices.

WIRE SX PRODUCTS

ESSEX WIRE CORPORATION

FORT WAYNE 6, INDIANA

Plants: Fort Wayne, Indiana; Detroit, Michigan; Anaheim, California. Warehouses* and Sales Offices: *Atlanta, Georgia; *Boston, Mass.; *Chicago, Ill.; Cleveland, Ohio; Dallas, Texas; Dayton, Ohio; *Detroit, Mich.; *Kansas City, Mo.; *Los Angeles, Calif.; Milwaukee, Wis.; *Newark, N. J.; Philadelphia, Pa.; *Portland, Oregon; *St. Louis, Mo.; *San Diego, California; *San Francisco, California.

For more details circle NED-5803 on enclosed inquiry slip

NEW

There's always something new in RAPISTAN

ALUMINUM POWER BELT CONVEYOR

Light weight, reversible power belt conveyor, for loading, unloading or stacking all types of packaged or bagged materials! It's the new, aluminum Stevedore, Jr.: roll it from job to job, place it easily in position! Capacity to 750 lbs. Non-corrosive. Lengths from 11' to 21'. Belt widths, 10" and 16". ⅓ or ¾ HP motor.

Write for prices and descriptive literature!

The RAPIDS-STANDARD COMPANY, Inc.

202 Rapistan Building Grand Rapids, Michigan

Representatives in Principal Cities

Rapistan® MATERIAL flow EQUIPMENT

CONVEYORS: Power or Gravity, Portable and Stationary. Also CASTERS • HAND & PLATFORM TRUCKS.

For more details circle NED-5804 on enclosed inquiry slip

ACCURACY TO .0001"
FOR TOOL ROOM AND PRODUCTION

FOR AS LITTLE AS
$117.50

◀ Finishing small wood pattern at 45,000 R. P. M. with the new PRECISE SUPER 40.

▲ PRECISE SUPER 50 grinding die section in Compound Universal Mount on Bridgeport Mill.

IN PRECISE MOUNTS ON LATHES AND OTHER MACHINE TOOLS, PRECISE GRINDER-MILLERS WITH ¼ H.P. AND SPEEDS FROM 20,000 TO 45,000 R.P.M. DO THE WORK OF SINGLE-PURPOSE MACHINES COSTING 100 TIMES AS MUCH!

VERSATILITY. For cylindrical, internal, external and form grinding; for milling with H. S. steel or tungsten carbide midget mills; for micro-finishing and polishing. Use on wood, glass, rubber, plastics, or any metal including the hardest alloy steel.

DURABILITY. All metal housing, rigid PRECISE quill, lubricant-sealed, micro-precision bearings. ¼ H. P. AC-DC motor (115 volts) is protected by replaceable fusetrons.

ATTACHABLE COOLFLEX SHAFT (optional). Quickly attached for bench work and handtool applications. Same speeds, same precision quill as in PRECISE GRINDER-MILLERS.

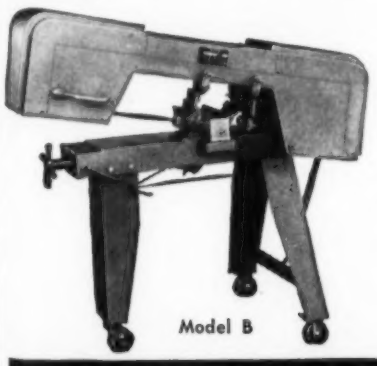
Write FOR NEW CATALOG

PRECISE PRODUCTS CO., 1346 Clark St., Racine, Wis.

PRECISE GRINDER-MILLERS

▲ For more details circle **NED-5805** on enclosed inquiry slip ▲

The "Junior" Model B Johnson Band Saw comes either with or without casters. Using casters, it can be easily pushed from one section of the shop to another, or two men can carry it. It has three-point supported rigidity—accuracy and speed. It will reduce your metal cut-off work. Capacity: 5" rounds, 10" flats.



Model B

JOHNSON METAL CUT-OFF BAND SAW

is also furnished in the larger Model J; Capacity 10" rounds, 18" flats. Sturdy and fast. Cuts square and true.

WRITE FOR CATALOG

JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

▲ For more details circle **NED-5806** on enclosed inquiry slip ▲

HANSEN TACKER
for 1001 uses

CHAIR seat covers—with a saving of 6c per seat—with neater, faster work—are being tacked with the Hansen Model T-2 Tacker.

It does a more efficient job for Lee L. Woodard Sons Co., Owosso, Mich. It provides neater seat covers, held securely in place.

What are your tacking problems? Submit specimen or sketch, with details.

Request Booklet

HANSEN

A.L. HANSEN MFG. CO.
5164 RAVENSWOOD AVE., CHICAGO 40, ILL.

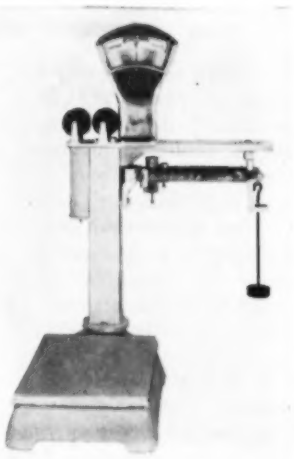
▲ For more details circle **NED-5807** on enclosed inquiry slip ▲

INDUSTRIAL CUSHION TIRE
developed for industrial trucks

By combining properly compounded rubber with correctly modulated contour, Mono-Cushion industrial tire provides easy steering, and minimized load breakage and floor wear. Improved wearing qualities and shock absorption characteristics are results of extensive tests based on data supplied by maintenance departments of large equipment manufacturers. Made by **Monarch Rubber Co.**, 39 Lincoln Park, Hartville, O.

▲ For more details circle **NED-5808** on enclosed inquiry slip ▲

INGREDIENT BATCH SCALE
has over-under weight indicator



Designed for compounding, mixing and blending general ingredients, model No. 1745 Detecto-Gram scale utilizes special over-under weight indicator that speeds up weighing operation. Indicator also makes visible slight discrepancies that might prevent standardizing finished product according to predetermined specifications. Scale has 200-lb capacity with settings in increments of 1-oz. Made by **Detecto Scales, Inc.**, 540 Park Ave., Dept. NED, Brooklyn 5, N. Y.

▲ For more details circle **NED-5809** on enclosed inquiry slip ▲

VAPOR-SPRAY DEGREASER
designed for heavy industrial use

Available in either nickel clad, stainless clad or zinc sprayed construction, model C-120 vapor-spray degreaser has vapor depth of 84 in., inside length of 96 in. and width of 60 in. Its noninflammable nonexplosive solvent is heated by steam, gas or electricity, and cleaning capacity is 18,000 lb per hour. Depending on size, parts degreased by this method can be removed absolutely clean and dry in from 1 to 15 minutes. Made by **Circo Products Co.**, 6531-A Euclid Ave., Cleveland 3, O.

▲ For more details circle **NED-5810** on enclosed inquiry slip ▲

• Here's an M&W finish that permits accurate retention of all desirable surface qualities of most metals . . . that adds lasting protection against heat, cold, weather, corrosion, stain and perspiration — Dulac Clear Universal Lacquer #462. It's formulated to give good adhesion with either the spray, dip or brush method. And it fits into fast production schedules because in five to ten minutes this successful general purpose lacquer dries out of dust . . . hardens in one hour. For complete information, write for Technical Data Bulletin 110 or let an M&W technical consultant discuss your requirements privately with you.

PIONEERS IN PROTECTION M&W Co 1876 *. . . where industry goes with finishing problems*

MAAS & WALDSTEIN COMPANY
Newark 4, N. J. • Chicago 12, Ill. • Los Angeles 34, Calif.
Pacific Coast Division: SMITH-DAVIS CO., 10751 Venice Boulevard, Los Angeles 34
MANUFACTURERS OF INDUSTRIAL FINISHES

▲ For more details circle **NED-5811** on enclosed inquiry slip ▲

Electric Eel cleans sewers and drains with SAFETY

New DOUBLE CABLE protects operator. *Speedy, more efficient.* Flexible Outer Sheath for Safety

Most Powerful Machine of its Type

- *Full Electric Reverse for Rapid Withdrawal*
- *Increased Speed Through Greater R.P.M.*
- *Lighter Due to New Aluminum Frame*
- *Rotating Inner Cables*
- *Lines 1¼" to 8" Diameter*
- *Runs up to 200 Ft.*
- *Over 6,000 in Use*
- *10 Years in Production*
- *Each Tool Engineered for a Particular Purpose*

Knives and tools are available for any pipe cleaning job.

Write for more information. Dept. NED

OHIO TOOL & ENGINEERING CO., Springfield, Ohio

▲ For more details circle **NED-5812** on enclosed inquiry slip ▲

GPX CUTS COSTS AGAIN!

GPX... Georgia-Pacific's plastic-faced plywood, with a satin-smooth, armor-hard surface that is part of the plywood itself, not merely an applied surface layer, is the perfect material for pallets. Extra strong, GPX won't splinter or chip—is super-smooth to protect the most delicate load. Long-lasting GPX is economical because pallets made from it can be used long after pallets of other materials have worn out.

Industrial users are also finding that GPX is ideal for instrument assembly-line tables, storage bins, fume ducts and countless other plant applications.

GPX is Weatherproof	**GPX** is Water Resistant
GPX is Abrasion Resistant	**GPX** is Stain Resistant
GPX is Vermin Resistant	**GPX** is Smooth
GPX is Extra Strong	**GPX** is Workable
GPX is Durable	**GPX** is Attractive

GEORGIA—PACIFIC
PLYWOOD & LUMBER CO.

Wholesale Distribution Yards in: BOSTON • CHICAGO • PHILADELPHIA • PORT NEWARK

FOR COMPLETE DATA, FILL IN AND MAIL THIS COUPON TODAY:

Georgia-Pacific Plywood & Lumber Co.
1258 Southern Finance Building
Augusta, Georgia

NAME.....

FIRM NAME.....

FIRM ADDRESS.....

.....

POSITION.....

Please send me the GPX Use Folder

▲ For more details circle **NED-5813** on enclosed inquiry slip ▲

RIGHT "OFF THE SHELF" with these OHIO STOCK GEARS

Ohio Stock Gears are by no means limited to a few of the most widely used types and diametrical pitches. Instead, these gears are designed to form a complete line, to meet the widest variety of power transmission needs • Your nearest distributor can supply you, right out of his stock, spurs, bevels, helicals, miters, worms and worm gears as well as steel rack in Diametrical Pitches from 24 to 3. Roller chain sprockets from 3/8" to 1 1/4" pitch • And because these gears are "stock", manufactured in quantities, you profit substantially by their use. You eliminate the excessive cost of special orders. You save manufacturing and delivery time and avoid delays • Check your gear requirements with the nearest distributor or with us, and see for yourself the savings you can make by standardizing on Ohio Stock Gears.

ESTABLISHED 1915
THE OHIO GEAR COMPANY
1320 EAST 179TH STREET • CLEVELAND 10, OHIO

OHIO GEARS

For more details circle NED-5814 on enclosed inquiry slip

WANTED Problems to be solved by MASONITE HARDBOARDS

These modern, easy-to-fabricate panels of "wood made better" are cutting costs and boosting quality in hundreds of plants.

Here are some of the 28 definite reasons why:

- They are dimensionally stable.
- Wood, veneer, glass, leather and most plastics can be laminated readily to them.
- They can be die-cut.
- They won't rust or corrode.

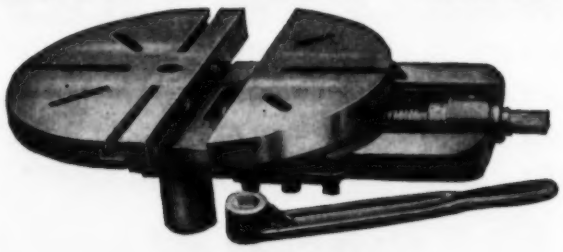
Masonite Hardboards come in 39 different types and thicknesses for industry. For complete technical data and suggestions about your production problems, write—

MASONITE® CORPORATION
111 W. WASHINGTON ST. • CHICAGO 2, ILLINOIS

For more details circle NED-5815 on enclosed inquiry slip

Try the MODERN

SAFETY DRILL TABLE



For Faster, SAFER Work in Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 1 minute drilling operation. Made in 6 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost on labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

FREE TRIAL OFFER

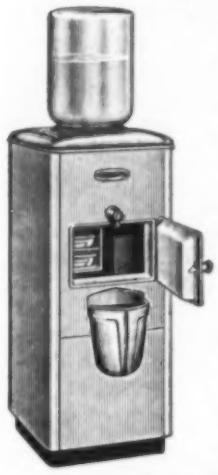
WRITE FOR FREE FOLDER

Shows many typical set-ups and use on radial drills. Complete specifications on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.

MODERN MACHINE TOOL CO.
Jackson, Michigan

For more details circle NED-5816 on enclosed inquiry slip

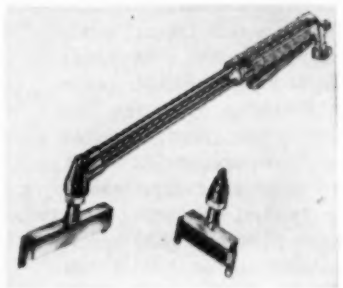
ELECTRIC WATER COOLER
bottle type has storage compartment



Equipped with fully sealed hermetic refrigeration system, model GC bottle type electric water cooler will will serve 50° F drinking water to about 50 office workers under average conditions. In addition, its stainless steel refrigerator compartment has nearly 1 cu ft storage space and can accommodate milk, soda or other bottles and will freeze over 3 lb of ice cubes. Compact electro-galvanized bonderized cabinet measures 16 x 16 x 41 in. without bottle and has infrared baked neutral gray finish with black recessed base. Made by **Cordley & Hayes**, 457 Fourth Ave., New York 16, N. Y.

For more details circle NED-5817 on enclosed inquiry slip

PAINT REMOVING BURNER
also descales and dehydrates metal

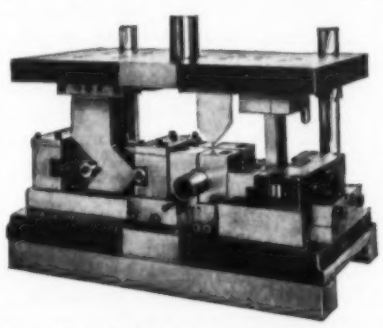


By supplementing oxy-acetylene flame with low-velocity flow of pure oxygen, paint removing burner also removes scale and rust and dehydrates metal surface leaving it in proper condition for repainting. Burner is designed to be attached to Torchweld No. 75 hand cutting torch and is available in 2 and 4-in. sizes. Guide shoes maintain correct distance from work surface. Speed on average painted surface is 600 sq ft per hour using 4-in. burner. Cost is $35 for 2-in. size, $39 for 4-in. size and $29 for cutting torch. Made by **National Cylinder Gas Co.**, 846 N. Michigan Ave., Chicago 11, Ill.

For more details circle NED-5818 on enclosed inquiry slip

TUBE CUT-OFF SHEAR
production-cuts tubes up to 3-in. OD

Employing horizontal and vertical blades, this tube cut-off shear attachment is capable of cutting-off up to 6000 pieces per hour while maintaining accuracy within 0.004-in. per piece length. Used on power punch press, it produces clean cuts with minimum of burr or distortion even in tough stringy thin-walled tubing. Built-in automatic tube stop assures uniform length pieces, and interchangeable dies permit quick change-over from one diameter to another. Made by **Vogel Tool & Die Corp.**, 2527 W. Moffat St., Chicago, Ill.



For more details circle NED-5819 on enclosed inquiry slip

Stanzoil Light Weight RSW-13's

Tough, Sheer... Sure Grip on Oily Parts

These new improved light weight Stanzoil RSW-13's are designed especially for handling small parts in testing and assembly, food products packing, etc. Shaped to fit the fingers naturally in gripping position, more hand comfort over long periods of wear. Finger tip gauge cut to .018 for greater sensitivity. Non-slip grip aids precision workers, speeds action. Your plant shows more productivity when employees aren't fumbling with thick, unwieldy rubber gloves. Write today for complete *Stanzoil* catalog.

Synthetic Rubber Division
The Pioneer Rubber Company
634 Tiffin Road Willard, Ohio, U. S. A.
Los Angeles, California

STANZOIL PIONEER

OVER 30 Years OF QUALITY GLOVE MAKING

For more details circle NED-5820 on enclosed inquiry slip

That Dissipate Static Electricity!

• Wagons, sweepers, trucks, hospital carts . . . anything that rolls . . . can now be equipped with silent, static-discharging wheels made of Republic's new electrically conductive rubber!

The tough, wear-resistant rubber wheels are a "must" for use around explosives, inflammable dusts and vapors.

Through the use of Republic's special new process, rubber is transformed into an electrically conductive medium that dissipates high static charges . . . ends sparking hazards.

Play safe! Put these resilient safety wheels on all your equipment. They are expertly molded to proper specifications by Republic Rubber, the specialist in the field of industrial rubber for nearly a half century.

Contact your local Distributor or write direct for information.

Pioneers in the use of COLD RUBBER

INDUSTRIAL RUBBER PRODUCTS BY
REPUBLIC RUBBER DIVISION
Lee Rubber & Tire Corporation
YOUNGSTOWN, OHIO
FOR LEE TIRES & TUBES • CONSHOHOCKEN, PA.

For more details circle NED-5821 on enclosed inquiry slip

8-Page Condensed Catalog

shows Veeder-Root Counters for mechanical, electrical and manual operation. Write for a free copy.

VEEDER-ROOT INC.
HARTFORD 2, CONNECTICUT

For more details circle NED-5822 on enclosed inquiry slip

PORTELVATOR

THE HANDY HAMILTON PORTABLE ELEVATING TABLE

Mechanical muscles for heavy lifts are cheaper 7 ways than manpower

STRONG AS AN ELEPHANT

WRITE FOR BULLETIN P-50

THE Hamilton TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

For more details circle NED-5823 on enclosed inquiry slip

SANDER DUST REMOVED WITH VACUUM

This wood manufacturing company in Detroit eliminated the nuisance of wood dust from the belt sander which used to fly all over the plant. When in operation the Spencer 1½ HP Industrial Portable is rolled up to the machine and the simple Spencer Gulper tool is hooked up under the belt. At other times the Spencer is available for general plant cleaning. It is another case of automatic and continuous removal of a constant stream of industrial dust. 356-Q

150 USES FOR VACUUM...ASK FOR BULLETIN
THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD

▲ For more details circle **NED-5824** on enclosed inquiry slip ▲

Uniformly Accurate ...BOLT THREADING WITH OSTER No. 902 *Rapiduction*

A wide variety of threading work is performed at production speeds and with sustained accuracy on this new machine. The "human element" is entirely eliminated in determining the exact moment the die-head should be opened and the lead screw disengaged to obtain the length of thread desired. One solenoid trips the die-head. Another solenoid trips the lead screw. Both solenoids are controlled from a single limit switch. Write for complete information.

THE OSTER MANUFACTURING CO.
2066 East 61st Street
CLEVELAND 3,
OHIO, U. S. A.

OSTER

No. 902 "RAPIDUCTION" has standard bolt range N. C. 1/2" to 2"; 12 pitch and finer 1/2" to 2-1/4"; pipe or nipple range 1/4" to 2".

▲ For more details circle **NED-5825** on enclosed inquiry slip ▲

around the world, it's

HOOVER BALLS

made of

CHROME STEEL • CARBON STEEL • STAINLESS STEEL BRASS • BRONZE AND MONEL METAL

"America's Foremost Ball Manufacturer"

HOOVER BALL and BEARING CO.
Ann Arbor, Michigan

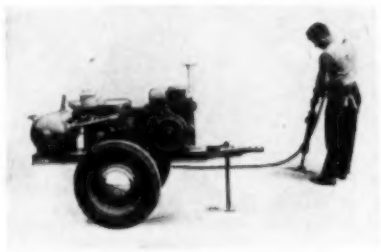
▲ For more details circle **NED-5826** on enclosed inquiry slip ▲

HIGH FREQUENCY HEATER
portable unit operates on 110-v ac

Designed to operate continuously regardless of load condition, this compact high frequency induction heating unit can be used on bench or table. Heating cycles can be preset for desired temperatures with automatic timer and operated by push-button or foot switch. Unit will heat 1-in. length of steel rod to 1500° F in approximately 3 seconds, can braze carbide tips to cutting tools up to 1½ in. sq, and will melt 4 oz of steel or brass in 4 minutes. Other applications include hardening, annealing, normalizing and soldering ferrous and nonferrous metals. Made by **Lepel High Frequency Laboratories, Inc.**, 39 W. 60th St., New York 23, N. Y.

▲ For more details circle **NED-5827** on enclosed inquiry slip ▲

PORTABLE AIR COMPRESSOR
rated 30 cfm at 100 psi pressure



Two-stage air-cooled Blue Brute portable air compressors deliver maximum of 150 psi and can be obtained as hand truck or trailer models. Applications include supplying air for pneumatic tools, light blasting and chipping and powering paint guns. Units are powered by air-cooled gasoline engine and feature feather valve, suction valve unloading, Air Maze oil bath cleaners and standard ASME air receivers. Made by **Worthington Pump & Machinery Corp.**, Construction Equipment Div., Worthington Ave., Holyoke, Mass.

▲ For more details circle **NED-5828** on enclosed inquiry slip ▲

SAFETY INNERSOLE
fits into any work shoe or boot

This safety innersole is designed to prevent foot injuries resulting from puncturing by nails, glass, rocks and other sharp objects. It consists of top-grade leather innersole, spring steel plate and rubber frictioned cotton duck, all bonded together with special cement under heavy pressure. Price is $1.60 per pair. Made by **Rubberhide Co.**, 161 Whitehead Rd., Trenton 4, N. J.

▲ For more details circle **NED-5829** on enclosed inquiry slip ▲

MAKE PEERLESS ELECTRIC *your* MOTOR DEPARTMENT

• When you bring your motor problems to Peerless Electric, you add a motor department to your plant facilities. Peerless is small enough to give individual engineering attention to your motor requirements—large enough to manufacture the motors you need in any quantity.

We can give you the same quick action on special motors that you could get in your own plant if you had a motor department—action that will give you promptly the information or samples you may need.

Single Phase
Polyphase
Direct Current Motors

THE PEERLESS ELECTRIC COMPANY • WARREN, OHIO
Manufacturers of Quality Motors for more than 55 years

Peerless Electric MOTORS·FANS·BLOWERS

▲ For more details circle **NED-5830** on enclosed inquiry slip ▲

When is a lathe too big?

A lathe is too big when:

SHELDON

TS568
11¼" Swing

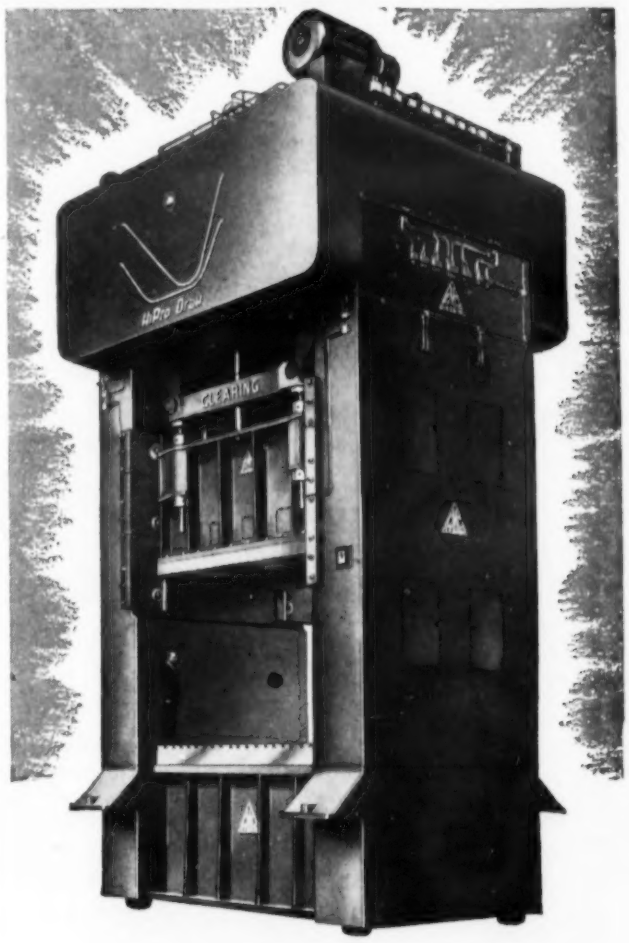
(1) When it is too large and complex for any but the most experienced to operate safely.
(2) When the power cost is excessive for the tool load.
(3) When the tool investment is out of all proportion to the requirements.
(4) When it is too cumbersome and too slow.
(5) When it takes up floor space, heat and light in which output could be multiplied with smaller machine tools.

Modern Sheldon Precision Lathes, eliminate these excess costs and loadings—leave far more on the profit side. 10"—11" and 12" Swing. "Zero Precision" Tapered Roller Bearings. Increased collet capacity.

Write for catalog.

SHELDON MACHINE CO. Inc.
Manufacturers of Sheldon Precision Lathes • Milling Machines • Shapers
4215 N. KNOX AVENUE • CHICAGO 41, ILLINOIS, U. S. A.

▲ For more details circle **NED-5831** on enclosed inquiry slip ▲



UP TO 70% FASTER PRODUCTION

AT SAME DRAWING SPEED

Clearing *HiProDraw* Cycles in 5 Seconds

Conventional press requires 8½ seconds

This mechanical, double-acting press provides fast approach and return combined with reduced speed during actual draw. It will deliver up to 70% more pieces per hour without drawing any faster than an ordinary double-action press. Write for full details about the new

CLEARING
HiProDraw

CLEARING MACHINE CORPORATION
6499 WEST 65TH STREET • CHICAGO 38, ILLINOIS

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When you have design problems involving temperature or pressure control—find out how BRIDGEPORT Bellows Assemblies can help you!

Used in all industries. Designed and built to *your* requirements. Expert technical help. Complete, speedy service. Wide range of metals and sizes.

Send for idea-filled Catalog PZ.

Bellows Assemblies . . . Bellows . . . Bellows Devices

BRIDGEPORT THERMOSTAT
Division
ROBERTSHAW-FULTON CONTROLS CO., BRIDGEPORT 1, CONN.

▲ For more details circle NED-5834 on enclosed inquiry slip ▲

Set it ~ Forget it!

Here's the answer to your burner problems. Read how KEMP cuts fuel costs, ends mixture tinkering, stops CO hazards...

Burn gas at a profit! With Kemp Carburetors and Burners in your plant—once the control is set to the mixture you want— *no one need touch it again.* Fuel-wasting tinkering is eliminated. Maintenance costs are negligible, just keep the Carburetors and Burners clean and your worries are ended!

SAFE, SURE, SIMPLE!

Every Kemp installation, whether for one burner or a thousand, is based on the famous Kemp Series "S" Carburetor. That means only one pipe to burners. No compressed air problem. At any point from 1% to 100% of capacity, you get the same precision mixture of air and gas.

BURNERS FOR ALL NEEDS

Kemp Burners come in all types and sizes: ribbon, pin point, fishtail—every standard model is immediately available. Special burners can be supplied quickly—designed especially for your job. All Kemp Burners are hand drilled, precision made, completely tested and guaranteed to deliver maximum BTU per hour/inch.

BEFORE YOU MAKE ANY INSTALLATION, large or small, learn how Kemp engineers can save you money! Ask one to call or send for Bulletin. (If you'd like a quotation, ask for special Quotation Form). Check coupon and *mail today.*

KEMP OF BALTIMORE *Carburetors — Burners*

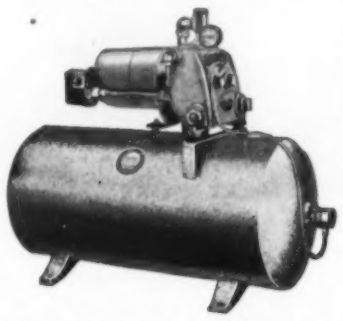
CARBURETORS
BURNERS
FIRE CHECKS
ATMOSPHERE & INERT GAS GENERATORS
ADSORPTIVE DRYERS
METAL MELTING UNITS
SINGEING EQUIPMENT
SPECIAL EQUIPMENT

THE C. M. KEMP MFG. CO., Dept. B-8, 405 E. Oliver St., Baltimore 2, Md.
Please send me ☐ Bulletin
☐ Special Quotation Form ☐ I'd like a Kemp Engineer to call.
Name.....
Company.....
Address.....
City..... Zone..... State.....

▲ For more details circle NED-5835 on enclosed inquiry slip ▲

STANDARDIZED PUMP in shallow and deep well types

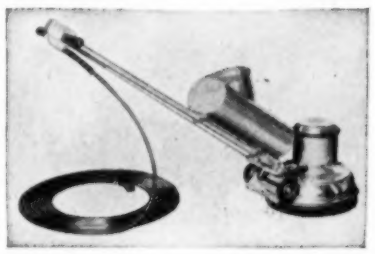
Both horizontal and vertical models are included in Jet line of pumps with motors of ⅓, ½, ¾ and 1 hp. Illustrated type SJ-30-L shallow well horizontal pump is assembled on 20-gal hot-dipped galvanized tank and includes automatic pressure switch, pressure gage, air volume control and foot or check valve. Construction includes bronze impeller and ejector assembly for either double or single pipe installation. Motors of same ratings, impellers and motor brackets are interchangeable on both horizontal and vertical models. Made by **Duro Co.,** 540 E. Monument St., Dayton 1, O.



▲ For more details circle NED-5836 on enclosed inquiry slip ▲

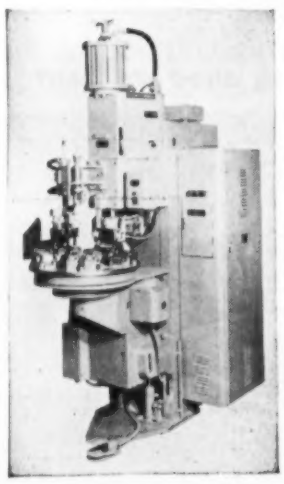
CLEANING SOLUTION TANK handle-type unit for floor machine

Having 3½-gal capacity, this handle-type solution tank does not affect balance of Kent floor machine whether it is full or empty. Made of rust-resisting galvanized iron, tank has large opening for easy filling. Positive shut-off valve for use when machine is temporarily stored and petcock for draining unused solution are incorporated. Made by **Kent Co.,** 273 Canal St., Rome, N. Y.



▲ For more details circle NED-5837 on enclosed inquiry slip ▲

PROJECTION WELDER has five stations and ten dies



Illustrated dual ram type resistance projection welder is supplied complete with motor driven geneva indexing table, electrical controls and automatic air-operated pick-off work ejector. This machine projection welds mounting plate of 16-gage low carbon steel to telephone part box of 18-gage low carbon steel. Since this box is considered disposable in case of breakdown, production of 1600 assemblies per hour as against 400 assemblies per hour on standard projection welder is important. Made by **Taylor-Winfield Corp.,** 1056 Mahoning Ave., Warren, O.

▲ For more details circle NED-5838 on enclosed inquiry slip ▲

THAT'S GEAR CUTTING, Packard!

MACHINES USED	ONE SHEAR-SPEED (internal)	ONE SHEAR-SPEED (external)	
Part Produced	Cylinder (housing)	Pressure Plate	Hydr. Piston Plate
Approx. Pitch Diameter	12"	12"	12"
Length of teeth cut (in.)	1.016	.976 (2 pcs.)	.562 (2 pcs.)
Output per hour	85-90	200-240	200-240
Machine Cycle Time	24 secs.	24 secs.	24 secs.
Estimated Tool Maintenance Cost	***	1/10th that for generating tools	
Change-over time	None Required	Approx. 2 hrs. total (complete set-up)	
Equivalent number of generating machines for same production	12 (single spindle)	Six (8-spindle type)	

***—No tool grinding required in first 5000 pieces produced.

Maximum Allowable Errors: Involute profile .....0.0004 in.; Index .....0.001 in. with any tooth; Parallel.....0.001 in. per inch of tooth

Ask for BULLETIN 1800-47

MICHIGAN TOOL CO.
7171 E. McNICHOLS ROAD • DETROIT 12, U. S. A.

▲ For more details circle NED-5839 on enclosed inquiry slip ▲

STEEL STRAPPING EQUIPMENT PAYS FOR ITSELF IN JUST 3 WEEKS
--for this Leather Manufacturer!

More proof that Stanley Steel Strapping cuts shipping costs of almost any product: A Stanley representative, called in for survey, recommended Stanley Ace Strapping Tool to this leather manufacturer. *Result:* number of units packed doubled. Equipment paid for itself in 3 weeks. Find out what Stanley Steel Strapping can do for *you* now! The Stanley Works, Steel Strapping Div., 177 Lake St., New Britain, Conn.

STEEL STRAPPING AND CAR BANDING SYSTEMS

STANLEY
Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

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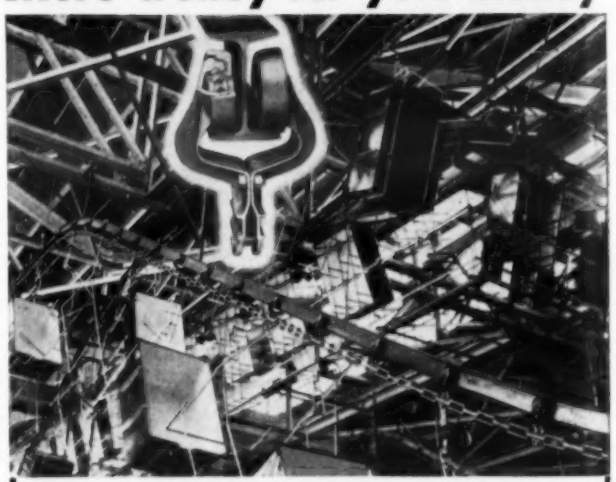
More trolley for your money



LINK-BELT Ball Bearing Overhead Conveyor Trolley

- Drop forged steel wheel and bracket
- Simple in design; fewer parts; less maintenance
- Unusually high load bearing capacity
- Bearings adequately lubricated and sealed
- Operates smoothly and quietly with high efficiency
- Quickly installed on new or existing systems
- Users report remarkably trouble-free operation

Folder 2241-B gives full details, send for your copy today.

11,808 **LINK-BELT COMPANY**
Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. Offices, Factory Branch Stores and Distributors in Principal Cities.

▲ For more details circle NED-5841 on enclosed inquiry slip ▲

UNIVERSAL ENGINEERING CO.
FRANKENMUTH 5, MICHIGAN

▲ For more details circle NED-5842 on enclosed inquiry slip ▲

HANSEN

Hardened steel nozzles for long wear. Removes rust, paint, carbon. Prepares metal for soldering and welding. Holds 3 pounds silica sand, works efficiently with 80 to 125 pounds compressed air. Air Blow Gun, which is a detachable part of sand blast cleaner, may be purchased separately, for blowing dust, dirt, etc. Has ¼" hose stem connection. Write for catalog.

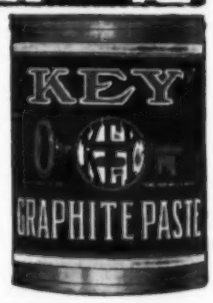
Air Spray Cleaners Quick-connective Couplings

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

▲ For more details circle NED-5843 on enclosed inquiry slip ▲

To Sneak Profits when You Seal with

Leaks on lines carrying oil (hot or cold), gasoline, kerosene and high pressure steam are a costly waste. Key Graphite Paste provides a perfect seal for these lines. It expands under heat but will not freeze the connection. Joints completely sealed with Key Graphite Paste can be easily disconnected without damage to threads or gaskets. Eliminate expensive leakage with Key Graphite Paste. Listed by Underwriters Laboratories.



Try Key Graphite Paste in your own Plant at no cost. Send for liberal free sample.

KEY COMPANY
2601 McCasland Ave.,
East St. Louis, Ill.

KEY Company

▲ For more details circle NED-5844 on enclosed inquiry slip ▲

Skyscrapers were built for the same reason!

High cost of ground area made it cheaper for skyscrapers to go *up* instead of spreading out. Towmotor HIGH STACKING offers industry the same cost-saving opportunity. Stack *ceiling-high*, save warehouse space, free floor areas. Learn how—write for "Handling Materials Illustrated." Towmotor Corporation, Div. 25, 1226 E. 152nd St., Cleveland 10, Ohio. Representatives in all Principal Cities in U. S. and Canada.

"THE ONE MAN GANG"
See this sound movie on Materials Handling in your office. Write for details.

TOWMOTOR
THE ONE-MAN-GANG ®

FORK LIFT TRUCKS and TRACTORS

7 OF THE 12 STANDARD MODELS FOR HANDLING 1500 TO 15,000 LB. LOADS

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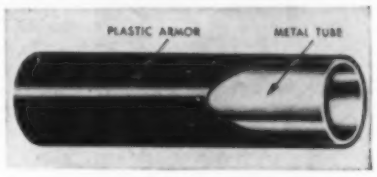
New Processes and Materials

INSTRUMENT TUBING has extruded thermoplastic coating



Metal-base Dekoron tubing has 1/32-in. chipproof coating of extruded thermoplastic to protect against corrosive atmosphere. It is immune to moisture, salt air, oils, acid and alkalies. Available in ¼ and ⅜-in. diameters, tubing can be bent easily and coating serves as color coding for line. Made by **Samuel Moore & Co.**, 1000 South St., Mantua, O.

▲ For more details circle NED-5846 on enclosed inquiry slip ▲

ELECTROLYTIC CLEANER suitable for job shop plating

Recommended for cleaning steel, brass, nickel and die-castings without attack, improved Detrex 53 electrolytic cleaner can be used also on metals prior to phosphate coating. It has high current-carrying capacity, is free from objectionable odor, rinses freely and does not contain soaps or resinates. As spray washer material, it can be used at concentrations up to 2 oz per gal without foaming and will completely remove drawing, stamping and buffing compounds as well as antirust coatings, oil and grease. Cleaner is supplied in either 140-lb steel kegs or in 450-lb nonreturnable steel drums. Made by **Detrex Corp.**, P. O. Box 501N, Detroit 32, Mich.

▲ For more details circle NED-5847 on enclosed inquiry slip ▲

PLASTIC OFFSET PLATES speed and simplify duplication

Developed to make possible wider use of offset duplication for illustrated sales bulletins, direct mail, ad reprints and office forms, Photospeed, Plastiplates eliminate five preparatory steps required by metal offset plates, have no expiration date and are not spoiled by exposure to daylight. They are ready for exposure in Plastiphoter plate-making cabinet after hand application of prepared mixture. Because they clearly show image to be printed as soon as exposed, they make possible visual check before inking on duplicator. Plates are adaptable to black and white and color halftone illustration and are economical for runs of 20 to 5000. Made by **Remington Rand Inc.**, Dept. NED, 315 Fourth Ave., New York 10, N. Y.

▲ For more details circle NED-5848 on enclosed inquiry slip ▲

FOR PROOF BEYOND COMPARE
Send for
RUBYFLUID
Soldering Flux

Special Offer

For $1 Ruby will send you one pint of liquid and one half pound of paste soldering flux.

Try it! See for yourself the amazingly stronger, smoother and longer lasting unions you get when you use Rubyfluid.

Rubyfluid
Wets out freely . . .
Has no harmful fumes . . .
Acts quickly and saves time . . .

In addition Ruby will send you Free a new booklet on "How to Solder."

SEND YOUR $1 TODAY TO—

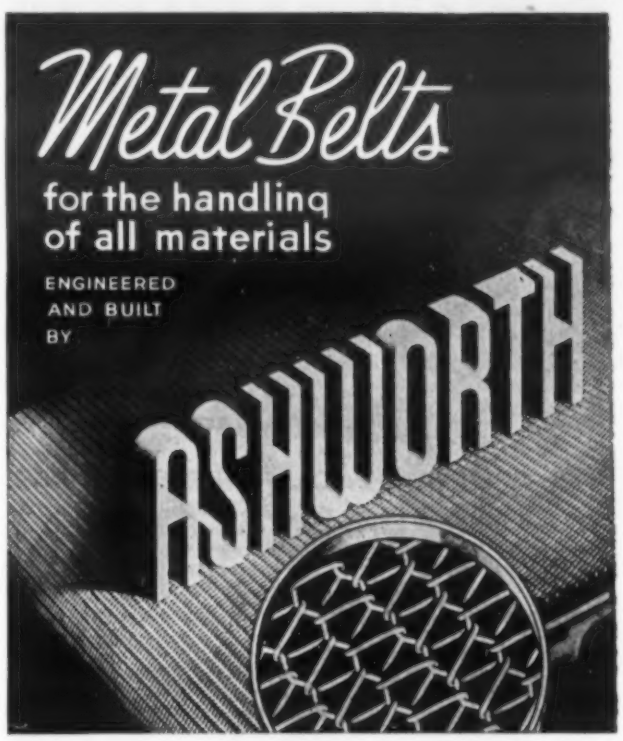
Ruby Chemical Co.
72 McDowell St.
Columbus, Ohio

Rubyfluid

▲ For more details circle NED-5849 on enclosed inquiry slip ▲

Metal Belts for the handling of all materials

ENGINEERED AND BUILT BY



WRITE FOR ILLUSTRATED CATALOG 47D

ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers located in Buffalo • Chicago • Cleveland • Detroit Los Angeles • New York • Pittsburgh • Seattle
Canadian Rep., PECKOVER'S LTD. - Toronto - Montreal - Halifax - Winnipeg - Vancouver

▲ For more details circle NED-5850 on enclosed inquiry slip ▲

N & F BINS REDUCE HANDLING COST

This photograph shows a group of Neff & Fry Bins used in a coal handling operation. The coal is dumped into a pit, elevated to the bins, withdrawn by gravity. Manual labor is virtually eliminated. What's more, the material is kept off the ground and out of the weather.

N & F Bins, built of Super-Concrete Staves with encircling steel rods, have the stamina to withstand maximum stresses. The staves are formed under great hydraulic pressure, giving them rocklike density and high compression strength. Heavy superstructures are mounted upon the bins without extra supports.

Thousands of N & F Bins have remained intact for decades, used for handling and storing many kinds of flowable bulk materials—coal, grain, seeds, peanuts, minerals, chemicals, sand, wood chips, clay, etc.

Don't decide upon storage facilities before getting all the facts about N & F Super-Concrete Stave Bins. Ask for a copy of our catalog containing full information and numerous photographs of installations.

THE NEFF & FRY COMPANY
EAST CENTRAL AVENUE, CAMDEN, OHIO

NEFF & FRY STORAGE BINS

▲ For more details circle NED-5851 on enclosed inquiry slip ▲

HEAR CLEARLY in the QUIET ATMOSPHERE of a BURGESS-MANNING ACOUSTI-BOOTH

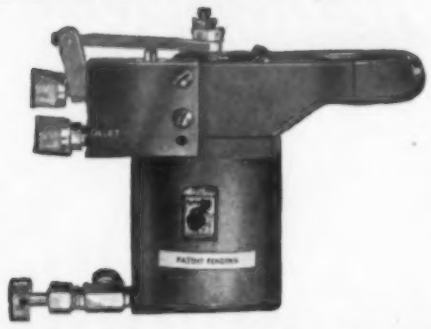
You can hear easily . . . talk comfortably in the noisiest surroundings . . . in a Burgess-Manning Acousti-Booth. Thick walls of sound-absorbent material soak up noise. Conversations are clearer . . . "private." Airy, no door . . . easily moved . . . sturdy construction.

NOTE THESE OUTSTANDING FEATURES
- Quiet inside
- Airy interior
- Movable—lightweight
- Sanitary—open construction
- Low maintenance cost—no movable or breakable parts
- Suited to any location

MAIL COUPON FOR FREE BOOKLET
Burgess-Manning Company
743-C East Park Ave., Libertyville, Ill.
Please send me your booklet describing Burgess-Manning Acousti-Booths.
Name _____
Firm Name _____
Street _____ City _____

▲ For more details circle NED-5852 on enclosed inquiry slip ▲

DOUBLE YOUR DRILL PRESS OUTPUT FOR $30

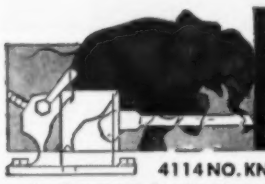


USE A NEW MEAD PNEUMATIC DRILL PRESS FEED FOR DRILLING REAMING TAPPING

This simple, inexpensive device quickly converts standard drill presses into semi-automatic machines — increases production substantially on suitable jobs: double or more in some cases.

Clamps to spindle quill in a few seconds. Automatically closes air fixture on work. Adjustable feed control and break-through cushion. Quick return. Easy to synchronize with automatic cycle equipment.

Air-Power does it quicker, cleaner, better. Write today for latest complete catalog.

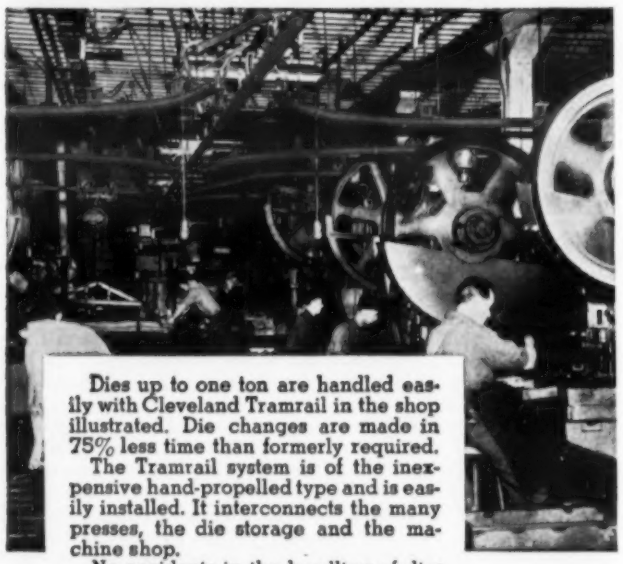


MEAD SPECIALTIES COMPANY

4114 NO. KNOX AVE., DEPT. N-80-A, CHICAGO 41, ILL.

For more details circle NED-5853 on enclosed inquiry slip

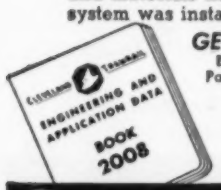
TIME FOR DIE CHANGES REDUCED 75%



Dies up to one ton are handled easily with Cleveland Tramrail in the shop illustrated. Die changes are made in 75% less time than formerly required.

The Tramrail system is of the inexpensive hand-propelled type and is easily installed. It interconnects the many presses, the die storage and the machine shop.

No accidents in the handling of dies and materials have occurred since this system was installed 12 years ago.

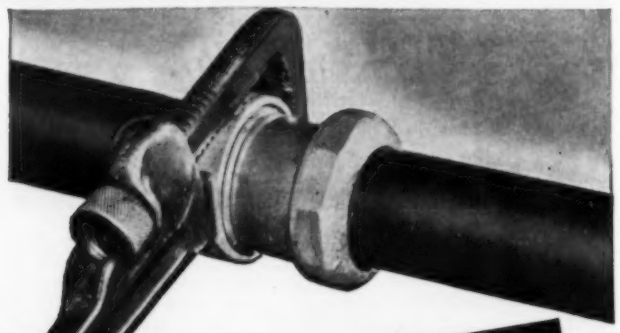


GET THIS BOOK!
BOOK No. 2008
Packed with valuable information

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6638 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

For more details circle NED-5854 on enclosed inquiry slip



30 SECOND JOINT FOR GAS, AIR, OIL OR WATER LINES

Join piping "Flexible-Tight" in half a minute with Dresser "No-Thread" Fittings. Just slip the fitting over plain pipe ends and tighten end nuts with a wrench. Joints are permanently tight. Resilient rubber gaskets absorb vibration, expansion, contraction.

A complete line of regular and long couplings, ells, tees, etc., is available. Sizes 3/8" to 2". Send today for catalog.

DRESSER "NO-THREAD" FITTINGS

Dresser Manufacturing Division (One of the Dresser Industries), 59 Fisher Ave., Bradford, Pennsylvania. In Texas: 1121 Rothwell St., Houston. In Canada: 629 Adelaide St., W., Toronto. Sales Offices: New York, Chicago, Houston, San Francisco.

For more details circle NED-5855 on enclosed inquiry slip

New Processes & Materials

CLEANING SOLUTION for personal safety equipment

Recommended for cleaning such personal safety equipment as goggles, respirators and helmets, No. 101 germicidal detergent removes dirt and deposited skin oils without inducing corrosion, staining or deterioration of rubber, plastic or metal parts. Solution can be used as spray, swabbing or immersion medium and is effective in hot or cold water. It is available in gallon containers or 2-oz bottles packed 10 to carton; gallon of solution makes 64 gal of cleaner. Made by **American Optical Co.**, 1492 Mechanic St., Southbridge, Mass.

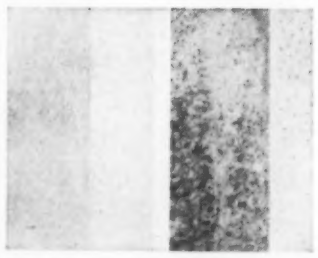
For more details circle NED-5856 on enclosed inquiry slip

POLYETHYLENE EXTRUSIONS in film, sheeting and tubing

Available in wide range of widths and thicknesses, Ivithene polyethylene extrusions are applicable for packaging bulk chemicals and food products, in automatic bag machines, for industrial and protective sheeting, as electrical insulations, as liners and containers and other uses. Among properties are negligible water vapor transmission, complete absence of plasticizer, unlimited shelf and use life, inertness to food substances and most chemicals, high dielectric strength, low-temperature flexibility and resistance to punching and tearing. Even at elevated temperatures, material shows no tendency toward tackiness. It can be heat sealed, printed and embossed. Made by **Irvington Varnish & Insulator Co.**, Fibron Div., Dept. NED, 6 Argyle Terrace, Irvington 11, N. J.

For more details circle NED-5857 on enclosed inquiry slip

ANTICORROSIVE PRIMER prepares rusted metal for painting



Where conditions are such that complete rust removal is impossible, Tuf-On-Rust anticorrosive primer can be applied to surface following removal of loose rust by wirebrushing. Illustration of two test panels shows one at left coated with this primer while one at right is coated with standard primer. Second coat of gray phenolic finish was applied to right-hand portion of each primed surface and panels then exposed on 45-degree roof position for 28 months. Definite signs of corrosion can be seen in panel at right. Anticorrosion primer can be applied by brush or spray and air-dries in 4 hours. Made by **Brooklyn Varnish Mfg. Co.**, 50-1 Jay St., Brooklyn 1, N. Y.

For more details circle NED-5858 on enclosed inquiry slip

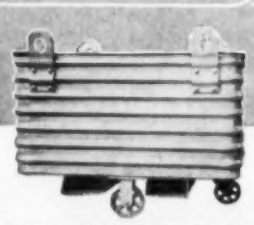
WHAT DO YOU NEED IN *Materials Handling Containers?*

POWELL DESIGNS AND BUILDS FOR ANY JOB OF ANY MATERIAL

How much do you spend moving material through your plant? Special handling containers go a long way toward lowering these costs by saving machine and truck operators many hours each week. Powell containers are designed and built to fit your special operation—and Powell prices will give you a pleasant surprise.

Let Powell look over your operation. No obligatons. Offices in principal cities.

POWELL PRESSED STEEL
SINCE 1920
Dept. 58, Hubbard, Ohio
(In Greater Youngstown)



Roll over caster box designed and built by Powell has floor mobility plus stacking and fork truck dumping features.

For more details circle NED-5859 on enclosed inquiry slip

HOT MELT PLASTIC COATINGS for GEARS • TOOLS • PRECISION PARTS

BEFORE

Dip

SECONDS AFTER

Coated • Protected

DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

Write for Bulletins and Free Samples
Fidelity Chemical Products Corp.
470 Frelinghuysen Avenue, Newark 5, N. J.

For more details circle NED-5860 on enclosed inquiry slip

ACROMARK MEANS "ACCURATE MARKING"

FILL DESIGN AND LETTERING WITH ENAMEL MECHANICALLY

ASK FOR— THE **ACROPRINTER** Reg. U. S. Pat. Off.

MADE IN SEVERAL SIZES
MANUALLY OR POWER OPERATED
CONSTANTLY IMPROVED

The ACROMARK Company

WRITE TO—7-11 MORRELL ST., ELIZABETH 4, N. J.
"THE ORIGINAL MARKING SPECIALISTS"

For more details circle NED-5861 on enclosed inquiry slip

Sh-h-h!

For very, very quiet ventilation investigate the new **Swartwout Airlift**

Completely engineered centrifugal type ventilator for efficient duct exhaust against static pressure. Write for Bulletin 341C.

18511 Euclid Avenue, Cleveland 12, Ohio.

The Swartwout Co.

Industrial Ventilation Specialists Since 1904
Equipment for Controlled Air Circulation

For more details circle NED-5862 on enclosed inquiry slip

"WALKS OPEN" any balky boxcar door

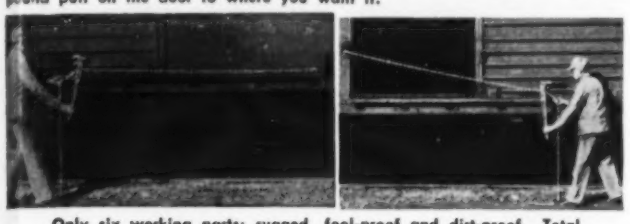
The NOLAN Standard Model S Boxcar Door Opener and Closer saves time, saves life, saves money!

● Here is a light, handy, portable tool that walks any balky door open or shut with ease as though hung on roller bearings. The operation consists simply of working a ratchet handle on a chain.

At every place where boxcars are loaded or unloaded, keep this NOLAN Model S Puller at hand. It may pay for itself on the very first door. It is certain to repay its price in time, labor and worry saved in a week or so. Its years and years of service are all clear profit for you.

Any boxcar door is opened or closed in a jiffy with this 90-second Door Puller. Its average time is 1½ minutes per door, no more. A quick ratcheting movement of the handle gives a 2000 pound pull on the door to where you want it.

$29.50 F.O.B. Bowerston



Only six working parts; rugged, fool-proof and dirt-proof. Total weight including its 15-ft. chain, only 21 lbs.—an easy one-hand job to carry and use anywhere. Order one or more now, or write for literature.

THE NOLAN COMPANY 128 PENNSYLVANIA AVE. BOWERSTON, OHIO

▲ For more details circle NED-5863 on enclosed inquiry slip ▲

PROTECTING THE HEART OF THE MOTOR *From Burning Out . . .*

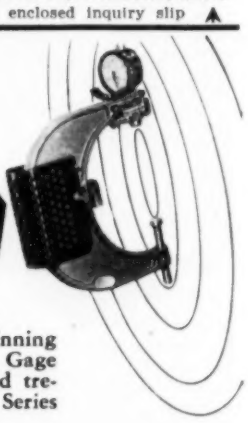
Photo Courtesy The Emerson Electric Mfg. Co. (½ HP Dual-Voltage, Capacitor-type Jet Pump Motor)

Built-in by the motor manufacturer, the Klixon Protector stands on guard ready to prevent the motor from burning out by cutting "off" the power should it become dangerously overheated. When it cools to safety, it snaps the power "on" again automatically. (When manual reset type is used, the motor is started again by pushing the red button.) Temporary overloads do not cause nuisance tripouts.

Regardless of the type of motor driven products you make, use motors with Klixon Protectors. Remember, all motors *do not* come protected . . . so to be sure that your motors are equipped with Klixon Protectors, have your motor purchase orders read "KLIXON PROTECTED MOTORS." They will keep your motors from burning out, reduce repairs and keep equipment operating. Specify Klixon Protectors on the motors you buy!

SPENCER THERMOSTAT
Division of Metals & Controls Corp.
1908 FOREST ST., ATTLEBORO, MASS.

▲ For more details circle NED-5864 on enclosed inquiry slip ▲



BULLS-EYE!

Federal Gages have a way of winning friends . . . but no other Federal Gage has ever won such immediate and tremendous acclaim as the Model 1000 Series Snap Gage. It's a hit!

MODEL 1000 SERIES FEATURES

EASY TO SET — as simple to adjust as a conventional "go, not-go" snap gage.

EASY TO USE — It's light; it's balanced right; it's a natural for fast, sure gaging.

EASY TO MAINTAIN — no tricky gadgets — it's a ruggedly built, complete gage.

EASY TO READ — shows *size* on dial, not just "go, not-go". Helps reduce scrap.

EASY ON THE BUDGET — Five sizes cover range from 0 to 6". $57.50 any one gage with .0005" Dial Indicator. ($75.00 with Dial Indicator graduated in .0001".) Sizes larger than 6" at extra price.

Write for complete details today. FEDERAL PRODUCTS CORPORATION, 1178 Eddy Street, Providence 1, R. I.

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively.

▲ For more details circle NED-5865 on enclosed inquiry slip ▲

New Processes & Materials

FLOORING MATERIAL hardens by chemical action

Made up of chemically-treated hardwood fibers and bonded together with plastic binder, Roc-Wood flooring material can be applied with trowel over rough uneven surfaces without underlayment. It sets within 4 hours and is ready for regular use within 24 hours of installation. Resilient flooring is skidproof and withstands vibration under severe conditions. It will not support flame and is termite and rot-proof as well as acid and chemical resistant. Resembling cork in finished appearance, material feather-edges readily and can be oiled, stained or otherwise treated for easier cleaning. Made by **Roc-Wood Floors, Inc.**, Dept. 12, 364 E. 23rd St., Chicago 16, Ill.

▲ For more details circle NED-5866 on enclosed inquiry slip ▲

ODORLESS ENAMEL applied over damp or dry surfaces

Recommended for use wherever odor cannot be tolerated, Odor-Less enamel can be brushed or sprayed and dries dust free in 3 hr. Supplied in white, it can be applied over painted or unpainted surfaces and is even safe to use on fresh plaster walls with its undercoater. Ink, pencil marks, lipstick and wax crayon marks wash off, and enamel is resistant to gasoline, carbon tetrachloride and alkali. Made by **Wilbur & Williams Co.**, Leon St., Boston 15, Mass.

▲ For more details circle NED-5867 on enclosed inquiry slip ▲

PLASTIC CONTAINERS sizes are ⅜ x 1¼ to ¾ x 5 in.

Available in several stock styles including shell, shoulder, screw cap, ring and bead vials, these plastic selling containers can be obtained in rigid polystyrene and cellulose acetate as well as in flexible polyethylene and cellulose acetate. Containers are furnished with plug and cap type polyethylene closures or with metal or Bakelite screw caps. Shatterproof, odorless and tasteless, they can be decorated and imprinted and are available in complete range of colors, clear or opaque. Typical of parts which can be packaged in these containers are lock washers, nuts, bolts, cotter pins, springs, drills, files and industrial jewels. Made by **Celluplastic Corp.**, Dept. NED, 50 Ave. L, Newark 5, N. J.

▲ For more details circle NED-5868 on enclosed inquiry slip ▲

10 TIMES HIGHER ABRASION RESISTANCE (standard abrasive wheel test)

SURETY SURESEAL SYNTHETIC RUBBER industrial gloves

PLUS

Sureseal Synthetic's higher snag and chemical resistance means safer, longer-wearing gloves—*much* lower glove costs.

Standard tests show that Sureseal Gloves are miles ahead on all counts — besides higher abrasion resistance, Sureseal Synthetic Rubber has 4 times higher snag resistance, much higher chemical resistance, than either natural rubber or standard synthetics.

Get more hand protection for less money in your plant—ask your distributor about Surety Sureseal Gloves, or write direct.

THE SURETY RUBBER CO. DEPT. N CARROLLTON, OHIO

In Canada: SAFETY SUPPLY COMPANY, Toronto, Ontario

▲ For more details circle NED-5869 on enclosed inquiry slip ▲

Specially designed for work in extremely close quarters . . . See how they fully engage nuts even in deeply recessed pockets. Special chrome alloy-steel . . . forged for EXTRA strength, 20% above Government specifications. EXTRA durability. The satin-smooth chrome skin gives EXTRA protection against rust and corrosion.

Sockets are accurately broached to assure perfect fit for EXTRA precision . . . every movement of the handle is transferred to the work, there is no lost motion . . . no slack to take up. All are perfectly matched and balanced to do the job easier . . . faster.

Each wrench has that instantly recognized Duro Quality. DURO METAL PRODUCTS CO., 2649 No. Kildare Ave., Chicago 39, Illinois.

DURO TOOLS (HAND TOOL DIVISION)
The Mechanic's Best Friend
2335 R OVER 2 BILLION BUILT SINCE 1916
ALSO MAKERS OF DURO MACHINE TOOLS

▲ For more details circle NED-5870 on enclosed inquiry slip ▲

Paisley SCIENTIFIC ADHESIVE SERVICE

FOR THOSE *HARD-TO-GLUE* JOBS . . GET A PAISLEY Scientific GLUE!

STEP up your efficiency. Start in now, using Paisley "WOOD-GLU" No. 2145 . . a new fast-setting cold bonding liquid resin wood glue. It will do a quicker, easier, better job on a multitude of hard-to-glue combinations where clamp time must be held at a minimum. Paisley "WOOD-GLU" has been time-tested, proven satisfactory for use summer and winter. Household wares, furniture, cabinets, interior doors, frames, and industrial wood gluing and quick repair jobs are aided by this economically priced scientific liquid resin adhesive. Give it a trial in your own shop soon.

TRY PAISLEY "WOOD-GLU" No. 2145

Consider these advantages:

1. READY TO USE
2. FAST SETTING—SAVES CLAMPING TIME
3. EASY TO HANDLE
4. HIGH COLD BONDING STRENGTH
5. NO FOAMING—NO WASTE
6. CLEAN WHITE COLOR
7. WORKS AT ANY TEMPERATURE ABOVE FREEZING
8. LOW COST

MAIL COUPON NOW FOR GENEROUS TRIAL OFFER!

Gentlemen: Please send complete information about Paisley Wood Working Glues.

☐ You may send on approval trial 5 gal. shipment of "WOOD-GLU" No. 2145 at 55 gal. drum price.

☐ Send me a copy of Laboratory Report on "WOOD-GLU".

FIRM_____

STREET_____ CITY_____

BUYER_____

PAISLEY PRODUCTS INCORPORATED
Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products
1770 CANALPORT AVE., CHICAGO 16, ILL. • PHONE CANAL 6-2219
630 W. 51st STREET, NEW YORK 19, N. Y. • PHONE COLUMBUS 5-2860

▲ For more details circle NED-5871 on enclosed inquiry slip ▲

SARCO

TYPE H RADIATOR TRAP

Steam heating systems are only as good as the steam traps which keep the radiator free from air and condensate. The famous Sarco bellows actuating it has made Type H a leader in this field. Angle, straightway or corner offset patterns. Catalog No. 150.

'289

SARCO SAVES STEAM

SARCO COMPANY, INC.
Represented in Principal Cities
Empire State Building, New York 1, N. Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO

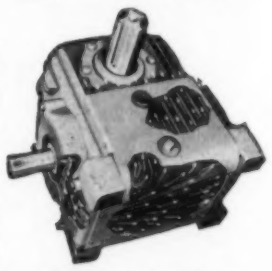
IMPROVES PRODUCT QUALITY AND OUTPUT

For more details circle NED-5873 on enclosed inquiry slip

A Billion RPM per year at 30hp?

That's duck soup to either of these 5" reducers—just like 100 hp at 1750 or 63 hp at 580 is to similar 8" models. That's what they're for: **continuous heavy loads.**

There's nothing special about them. Both are standard stock models. One (right) is fan cooled; the other (above) water cooled. But BOTH have Cone-Drive double enveloping gearing. That's what gives them their stamina, their ability to carry big loads continuously, their outstanding shock resistance, their compactness and their **amazing low cost per horsepower.**



Ask for data sheet #8974, pick your size and ratio and get a quote. You have a real surprise coming.

CONE-DRIVE GEARS
Division Michigan Tool Company
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
7171 E. McNichols Road • Detroit 12, Michigan

For more details circle NED-5874 on enclosed inquiry slip

MANY INDUSTRIAL ROLL PROBLEMS are solved by using

SHAF-TITE* ROLLS

Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.

SEND FOR NEW CATALOG NO. 48
Most complete publication of its kind

Industrial Roll Division
RODNEY HUNT MACHINE CO.
73 Maple Street, Orange, Mass.

*Reg. U.S. Pat. Off.

For more details circle NED-5875 on enclosed inquiry slip

New Processes & Materials

FREIGHT CAR FLOORING is combination of steel and wood

Wheel loads up to 10,000 lb can be exerted on this composite steel and wood floor for box cars, gondolas and flat cars. Hat-shaped steel ribs, placed across width of car and welded to center sill, stringers and side sill angles alternate with wood planks bolted to rib flanges. Top surfaces of hat sections form part of floor. Since they extend slightly above the wood planks, they support most of load and take wear and tear of rough service. Steel planks, tack-welded to ribs are used where it is impossible to bolt wood planking. Bulk lading can be mechanically unloaded without damage to flooring and packaged lading rests on steel ribs, yet bracing can be nailed to wood planks. Made by **Armco Steel Corp.**, 1000 Curtis St., Middletown, O.

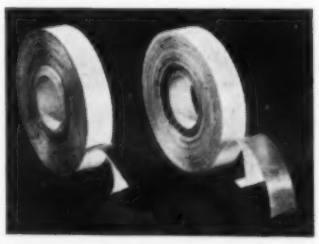
For more details circle NED-5876 on enclosed inquiry slip

ACID-TYPE METAL CLEANER simplifies surface conditioning

Developed to simplify acid spray or immersion washing and surface conditioning of ferrous and nonferrous metals prior to painting, No. 1620 process performs three operations simultaneously. It removes soil and dirt without additives, provides firm paint bond and inhibits rusting to eliminate need for final chromic acid rinse. Any existing spray washing setup of three or more stages can be used without modification of established equipment or production lines. Made by **Turco Products, Inc.**, Dept. 25, 6135 S. Central Ave., Los Angeles 1, Calif.

For more details circle NED-5877 on enclosed inquiry slip

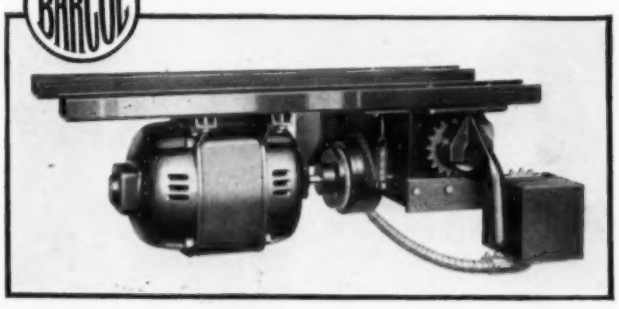
INSULATING TAPE welds into continuous elastic skin



Based on Bakelite polyethylene resins, this insulating and splicing tape's layers weld into homogeneous and resilient skin 10 or 15 minutes after wrapping around cable splice or tool handle. Plastic base keeps self-bonding tape flexible despite severe weather conditions. It remains unaffected by temperatures from 120° to as low as −30° F. Water is not absorbed by plastic, and tape requires no adhesive. Applications include insulation and harness wrapping, grommeting and resealing caps to bottles and binding wires together. Tape can be obtained in clear or black forms. Made by **Bishop Mfg. Corp.**, Dept. AG, 254 W. 31st St., New York, N. Y.

For more details circle NED-5878 on enclosed inquiry slip

BARCOL LOOK FOR THIS MARK OF QUALITY



Just Push a Button . . . to Open the Door

Use the BARBER-COLMAN Electric Door Operator. Save time, save trouble, save money . . . improve efficiency, reduce heating costs, eliminate drafts, make door-opening easy. Models are available for swinging, sliding, overhead, or steel rolling doors, and for sliding gates. All have built-in safety features. Any model can be operated by push-button switch, by electric eye, or by the amazing Barcol Radio Control. See your Barcol representative for details, or write us for descriptive bulletins.

SALES AND SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

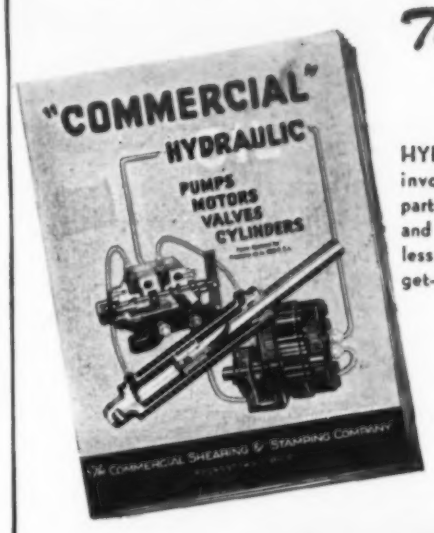
BARBER-COLMAN COMPANY
108 MILL STREET • ROCKFORD, ILLINOIS

The Only Manufacturer of All Three...

GARAGE DOORS | ELECTRIC OPERATORS | RADIO CONTROL

For more details circle NED-5879 on enclosed inquiry slip

Your Copy Will Be Profitable To You!



HYDRAULIC circuits involve fewer moving parts—can be arranged and mounted to occupy less space in "hard-to-get-to" locations.

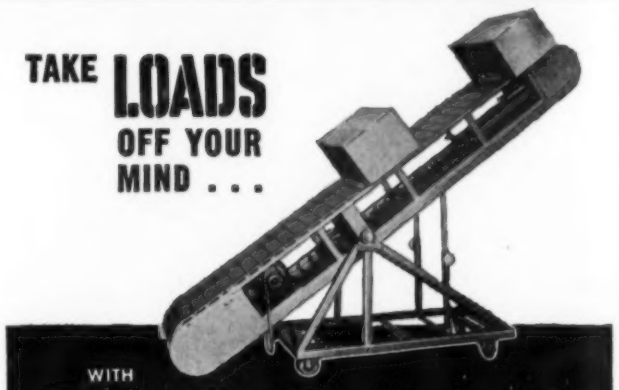
Just Out - 12 pages

Ask For Catalog H-2

The COMMERCIAL SHEARING & STAMPING COMPANY
YOUNGSTOWN 1, OHIO.

For more details circle NED-5880 on enclosed inquiry slip

TAKE LOADS OFF YOUR MIND . . .



WITH STEEL-PARTS INCLINED PLANE STEEL BELT CONVEYOR . . . .

✓ STEP UP HANDLING!
✓ SAVE VALUABLE SPACE!
✓ REDUCE WASTE!

• Solve each specific materials handling problem with the specific STEEL-PARTS steel belt conveyor pre-engineered to that need. The STEEL-PARTS Inclined Plane model shown here is ideal where height of elevation is a pre-determined factor. Raise production efficiency — lower unit handling cost — reduce waste — save operating space with flexible, sagless STEEL-PARTS steel belt conveyors. Write today for complete information, including engineering data and specifications.

STEEL-PARTS MANUFACTURING CO.
4624 West Harrison Street • Chicago, Illinois
DIVISION OF THE BLACKSTONE MANUFACTURING COMPANY

For more details circle NED-5881 on enclosed inquiry slip

KUSHION-TORK
WHAT IT WILL DO FOR YOU

The Cushion Torque of Kanti-Lever Couplings absorbs the hammer blows of sudden or reversing loads and dampens the torsional and radial vibration that cause wear, fatigue and sometimes failure of Motors, Speed Reducers, Ball Bearings and productive machinery. No other coupling is like the Kanti-Lever: It has a circular series of laminated Cantilevers of 200,000 lb. steel, operating in slots, the tapered sides of which automatically stiffen the Cantilevers under increased overloads. Special end-play up to four inches is possible without end thrust. The outer periphery of the Kanti-Lever is available as a brake drum for quick-stopping or reversing machinery. Send for Bulletin No. 28-D.

Kanti-Lever Couplings

4,000,000 h. p. in Use

MFGRS. OF SECTIONAL STOCK RACKS

BROWN ENGINEERING CO.
129 N. THIRD ST. READING, PENNA.
RACKS • VISES • CLUTCHES • COUPLINGS

For more details circle NED-5882 on enclosed inquiry slip

PIPE MARKERS

anyone can use— everyone can read

QUIK-LABEL Pipe Markers conform to American Standards Association Pipe Identification System. QUIK-LABELS come on handy cards . . . stick without moistening. Names of materials printed in large black letters on correct ASA background colors. CAN BE READ UP TO 75 FEET. Markers for over 140 materials, ***including all materials listed in ASA Standard A13,*** available on Brady Stock Cards. Specials made to your order. QUIK-LABEL Pipe Markers are Silicone Plastic coated to resist dirt, grease, fumes, moisture . . . indoors or out. Replace slow and costly painting and hand stenciling. Exclusive Starter-Strip automatically releases part of label for fast peeling. QUIK-LABELS mark your pipes so that anyone who can read will know what's in them. ***QUIK-LABELS leave no room for doubt . . . or tragedy.*** Write for useful literature and FREE SAMPLES today.

FREE SAMPLES

W. H. BRADY COMPANY Established 1914

Manufacturers of Self-Sticking Tape Products
Chippewa Falls 5, Wisconsin • Distributors in 125 Cities

For more details circle NED-5883 on enclosed inquiry slip

FOR 15,000 KVA INTERRUPTING CAPACITY

Specify

ALLIS-CHALMERS TYPE E-145 INDOOR OIL CIRCUIT BREAKERS

★ Rated 2500 volts; 400 amps 3 and 4 poles

CONTACTS are self-wiping, easily accessible. Arcing contacts of special alloy have high thermal absorption, resist wear. Space requirements are small. Every breaker tested at the factory. Operation: Automatic or manual trip. Specify either manual closing (panel or remote control mounting), or solenoid closing (panel or pipe frame mounting).

For complete facts, send for bulletin B6021.

Other A-C breakers in standard ratings up to 230,000 volts and 5,000,000 kva interrupting capacity.

A-3008

ALLIS-CHALMERS, 918A SO. 70 ST. MILWAUKEE, WIS.

ALLIS-CHALMERS

For more details circle NED-5884 on enclosed inquiry slip

SPECIFY LUMA SOLDERING TOOLS for DEPENDABILITY and SPEED on PRODUCTION WORK

• The original and only pin point precision soldering tool for all types of soldering.

• Production increases average 25 to 35% using LUMA METHOD of controlled concentrated heat.

• Eliminate maintenance cost! Use the new time-saving method of soldering!

Terminal Work on a Production Basis

The resistance principle of heating is adaptable to all soldering requirements, offering savings not found by using other methods. Television, Telephone, Radio, Electronic and Motor Manufacturers are a few of the users who have found LUMA to be the solution for their soldering jobs.

NO OPEN FLAME—NO BURNS—NO COLD JOINTS

Especially adapted and recommended on soldering applications where core flux solder is used.

A size and type tool for every soldering or brazing job. Take advantage of our Free Two Weeks Trial offer and use a LUMA in your plant.

Consult Your Nearest Supply House

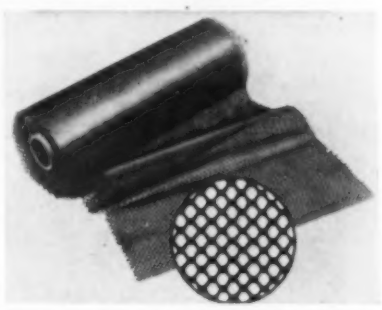
LUMA ELECTRIC EQUIPMENT CO.

P. O. Box 132 NED Toledo 1, Ohio

For more details circle NED-5885 on enclosed inquiry slip

New Processes & Materials

FABRICATED NEOPRENE MESH acts as cushion for fragile parts



Resistant to oil, chemicals, sunlight, abrasion and heat, Neotex fabricated neoprene mesh protects against slipping and breakage, silences noise and reduces fatigue when used underfoot. Supplied in 27-in. wide sections up to 50 ft long, matting can be used as wrap for fragile materials and as cushion for highly polished parts during assembly or machining. Other applications include decreasing noise and breakage in cafeterias and laboratories and for machine vibration dampening. Carriers can be lined with material to protect smooth surfaces and it can be formed into basket conveyors for delicate products. Made by **Research Products Corp.,** 1017 W. Washington Ave., Madison 10, Wis.

For more details circle NED-5886 on enclosed inquiry slip

ALL-PURPOSE GLUE is fast-setting resin adhesive

Suitable for glueing together almost all surfaces, F2214 all-purpose glue dries cold, tacks immediately and is permanently flexible. It will work equally well in both hand and automatic glueing machines. Applications include joining paper to metal, varnished and other difficult stocks; metal foils; paper to plastic or wood; and labels to jars. Made by **Federal Adhesives Corp.,** 212 Wythe Ave., Brooklyn 11, N. Y.

For more details circle NED-5887 on enclosed inquiry slip

COLLAPSIBLE TUBES are of laminated or coated foil

Fabrication of tubes from foil laminated or coated on both sides with plastic greatly increases number of substances that can be packaged in collapsible containers. Illustration shows mustard being applied to sandwiches from tube. Because it is possible to vary lining to meet wide range of packaging requirements, these tubes can be used for such items as cream cheese, jelly spreads, peanut butter, catsup, ready-to-use cake icings and beauty aids. Choice of film for outer ply is governed by appearance and protection desired. Made by **ATF Inc.,** Dept. NED, 200 Elmora Ave., Elizabeth B, N. J.

For more details circle NED-5888 on enclosed inquiry slip

PLATECOIL

Replaces Pipe Coil

FOR HEATING, COOLING OR DRYING

PROVIDES 4 OUTSTANDING SAVINGS

1. More Prime Surface for More Efficient Heating.
2. Develops Quick Heat for Quick Starts. (As Much as 50% Faster Than Pipe Coil.)
3. Takes Half the Space, Weighs Half as Much as Pipe Coil.
4. Platecoils Are Easily Cleaned or Replaced in Minutes . . No Downtime . . No Tank Dumping.

Take advantage of the complete laboratory assistance offered by Kold-Hold to help you with your heat transfer problems.

Send for complete technical manual and descriptive Bulletin No. P57

PLATECOIL Division KOLD-HOLD MFG. CO. LANSING 4, MICHIGAN

For more details circle NED-5889 on enclosed inquiry slip

the case of the walking ducks

Occasionally engineering resourcefulness can spotlight an otherwise plain industrial product with a new and unusual use . . . such as the case of this Woven Wire Conveyor Belt installation in a duck brooder. » » » Newly hatched ducklings, it seems, have to be kept moving to be kept alive. Placed on this specially built woven wire belt, moving slowly, the ducklings remain there for eight days . . . continually treadmilling away from the falling end of the belt. Mortality rate dropped to zero! » » » Even if you don't operate a duck hatchery, call in a Cambridge engineer whenever you have a problem concerning the movement of materials or products during processing. » » » Let him explain the superior construction features of **CAMBRIDGE Woven Wire Conveyor Belts.**

This illustrated 130 page catalog --FREE--to men concerned with production control. Write now.

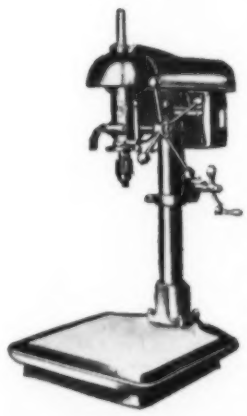
CAMBRIDGE WIRE CLOTH CO.
Dept. C • Cambridge 8, Md.

BOSTON • NEW YORK • BALTIMORE
PITTSBURGH • DETROIT • ST. LOUIS
CHICAGO • SAN FRANCISCO • HOUSTON

For more details circle NED-5890 on enclosed inquiry slip

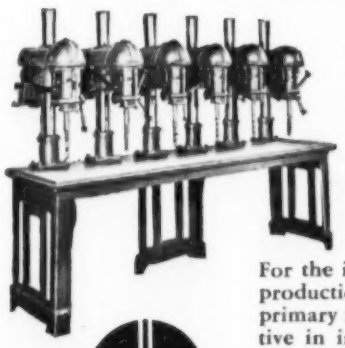
Cut your production costs

WALKER-TURNER *designed* DRILL PRESSES



cover a wide range of models, speeds, service

15" PRODUCTION MODEL
4 speeds: 600, 1250, 2440, 5000 r.p.m.
Spindle travel: 4¼".
Capacity: 18½" chuck to table.
Head Construction: one-piece gray iron casting, line-bored for greater accuracy.
Compact, portable: can be located in assembly lines, reducing handling costs.
Adaptable for sanding, grinding, mortising, shaping and other metal and woodworking operations. Bench and floor models.



20" DRILL PRESS 6 Spindle, Hand Feed
Speeds: (5) 400, 800, 1200, 1800, 2600 using a 1740 r.p.m. motor.
Capacity: 1".
Spindle travel: 6".
Head Construction: one-piece gray iron casting, line-bered for accuracy.
For the industrial user where the production rate and initial cost are primary factors. Particularly effective in increasing production on many jobs where a series of holes are to be drilled, tapped, reamed or counter-bored in a single piece. Other multiple-spindle models from 2 to 6 spindles.

walker-turner DIVISION

SOLD ONLY THROUGH AUTHORIZED DEALERS

SEE YOUR LOCAL DEALER for complete specifications on these and other metal and woodworking power tools in the Walker-Turner line, or mail coupon for new catalog

KEARNEY & TRECKER MILWAUKEE

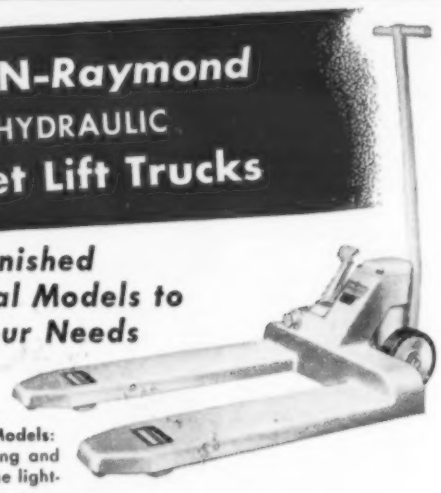
WALKER-TURNER DIVISION
PLAINFIELD, NEW JERSEY

WALKER-TURNER DIVISION
Kearney & Trecker Corp., Dept. N8, Plainfield, N. J.
Please send me a copy of the complete Walker-Turner Catalog.
Name.....
Firm.....
Address.....
City..... Zone..... State.....

For more details circle NED-5891 on enclosed inquiry slip

LYON-Raymond
HYDRAULIC
Pallet Lift Trucks

Furnished in Several Models to Fit Your Needs



1. Streamlined Lightweight Models: For fast handling and maneuvering the lighter pallet loads.
2. Heavy Duty Models: For pallet loads up to 4,000 lbs. — Also 6,000 lb. capacities.
3. Electric Tiering Models: New — Different — The Shortest — The Lightest — The Most Maneuverable of any powered Pallet Tiering Truck.

Write for literature on the models in which you are interested.

LYON-Raymond CORPORATION
Electric Power Trucks . . . Skid and Pallet Lifts
Hydraulic Elevating Equipment
Positioning . . . Sheet and Die Handling
4127 Madison St. GREENE, N.Y.

For more details circle NED-5892 on enclosed inquiry slip

CUT AIR HOSE COSTS
SPEED UP PRODUCTION
PREVENT ACCIDENTS
SAVE TIME
with CHAMPION
AIR HOSE REELS

Even if you disregard the increased production, the savings in time afforded workers . . . Champion Air Hose Reels still more than pay for themselves in reduced air hose replacement costs and in greater safety. They keep air hose off-the-floor, out-of-the-way, yet always convenient—instantly accessible. They're fully described in the free Champion Catalog!

for ceilings walls and floors

Specify CHAMPION AIR COMPRESSORS
... for 21 Features that CUT COSTS!

Endurance, performance and economy are the qualities you want in an air compressor. When you compare the materials, workmanship and the sound practical design of the Champion Line—you'll agree that the Champion can't be beat! The free Champion Catalog shows you 21 outstanding EXTRA FEATURES found in every Champion Air Compressor—write for your copy TODAY!

The model OE-40-60 Two Stage Compressor shown is one of the 54 Champion Models available from ¼ to 7½ H.P.

CHAMPION PNEUMATIC MACHINERY CO.
837 NORTH PLEASANT STREET
PRINCETON, ILL.
CHAMPION
5124 NED

For more details circle NED-5893 on enclosed inquiry slip

A TOOL BOX AT YOUR FINGERTIPS

49-16

SET NO. 1 FOR SMALL SHOPS

Continental Interchangeable Counterbore sets give you a wide variety of cutting tools in a compact, convenient form. Three sets are available, for the large or small toolroom. Each set features the famous Continental indestructible drive that will not stick, will not break, and is always hand detachable. Full details are given in Bulletin D27161. Send for your copy.

CONTINENTAL TOOL WORKS
Division of Ex-Cell-O Corporation
Detroit 32, Michigan
CTW

For more details circle NED-5894 on enclosed inquiry slip

New Literature and Catalogs

Mechanical Engineers' Handbook

The 12th edition of "Kent's Mechanical Engineers' Handbook" in two volumes is latest compilation of data on this subject. "Power" volume, edited by J. Kenneth Salisbury, Division Engineer, General Electric Co., contains 1405 pages and 1024 illustrations. It covers basic components of any power process; service functions; power producing equipment; refrigeration, heating, ventilating and air conditioning; electric power; atomic energy; instrumentation; power test codes and mathematical tables. "Design and Production" volume, edited by Colin Carmichael, Editor, *Machine Design*, contains 1459 illustrations and has 1611 pages. It is directed primarily toward engineers concerned with design and manufacture of machinery, appliances, mechanical equipment and other engineered products. These two handbooks offer the engineer a quick grasp of the essentials of mechanical engineering. Price is $8.50 for each volume. Published by John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N. Y.

For more details circle NED-5895 on enclosed inquiry slip

Power Transmission Equipment

Boston Gear Works—386-page catalog No. 55 illustrates and describes over 4500 stock items of power transmission equipment and component machine parts. Application, selection and ready reference data are given on all products. Covered are over 100 product groups including gears, roller chain, sprockets, ball bearings, flexible couplings, pulleys, bronze bearings, pillow blocks, speed reducers and flanged cartridge bearings. Engineering data, horsepower rating charts and drive selection information are included.

For more details circle NED-5896 on enclosed inquiry slip

Air Pumps & Motors

Leiman Bros., Inc.—How air pumps operate and where they can be used effectively are dealt with in 16-page illustrated catalog 450. Performance curves, specification tables and other data are given on these rotary positive type pumps which produce vacuums up to 29 in. and pressures up to 25 psi. Also described are air motors and gas pumps.

For more details circle NED-5897 on enclosed inquiry slip

Screw Machine Feed Fingers

Green Mfg. Co.—6-page illustrated bulletin "Master Feed Fingers" describes units which have adjustable rubber inserts and are available in sizes and styles for all makes of automatic screw machines.

For more details circle NED-5898 on enclosed inquiry slip

Woven Wire Slings

Cambridge Wire Cloth Co.—34-page illustrated price list gives dimensions and application data on complete line of woven wire slings. They are available in standard widths from 3 to 30 in. and from 36 to 132-in. standard lengths. They are offered in variety of metals and alloys including stainless steel in accordance with needs of service.

For more details circle NED-5899 on enclosed inquiry slip

IRON BULWARK
AGAINST CORROSIVE FLUIDS
Fairbanks® all iron gate valves

Fig. 0904 ALL IRON GATE VALVE 125# SWP 200# WOG Solid Wedge Taper Seat Malleable Iron Seat Rings 2"–12" Sizes

...made of high-test alloy iron to withstand the action of many of the strongest chemicals, give long service under severe operating conditions. These, like all other Fairbanks Valves are low in maintenance cost, easy to operate and long-lasting in service ... a real answer to cost-cutting needs today.

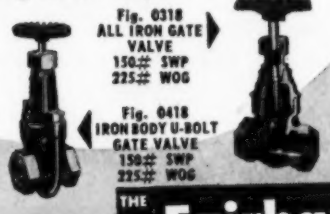


Fig. 0318 ALL IRON GATE VALVE 150# SWP 225# WOG
Fig. 0418 IRON BODY U-BOLT GATE VALVE 150# SWP 225# WOG

For other types of corrosive fluids such as dry carbon dioxide, ethyl acetate, and malt beverages, use FAIRBANKS BRONZE SOLDER END AND FAIRCO-BRAZE (Silver-Brazed) Valves.
For full details consult your distributor or write direct

THE Fairbanks COMPANY
393 LAFAYETTE STREET • NEW YORK 3, N. Y.
Branches: New York 3 • Pittsburgh 22 • Boston 10 • Rome, Ga.
CASTERS • TRUCKS • VALVES • DART & "PIC" UNIONS

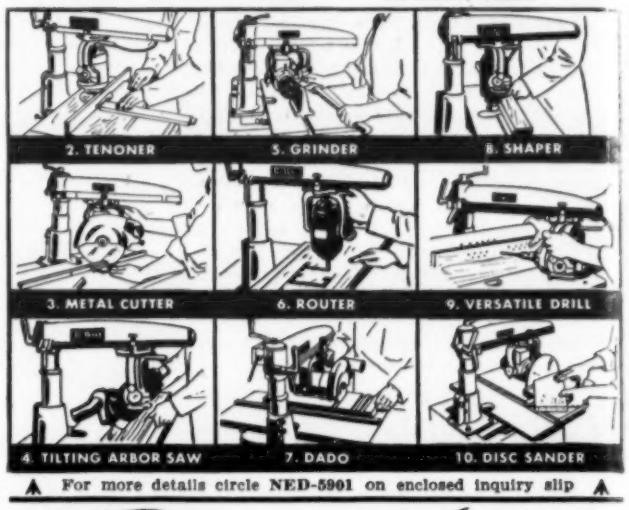
For more details circle NED-5900 on enclosed inquiry slip

10 POWER MACHINES IN ONE!

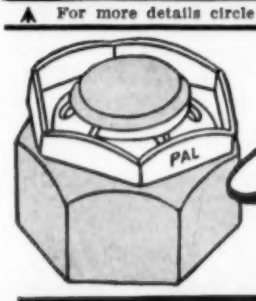
1. RADIAL ARM SAW

That's what you have (and more) when you own a flexible, all-purpose DeWalt. It's fast, accurate, safe—built for continuous service. Write for catalog.

DE WALT INC.
128 Fountain Avenue, Lancaster, Penna.



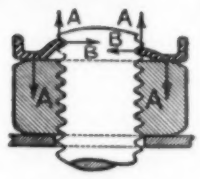
For more details circle NED-5901 on enclosed inquiry slip



THIS NUT WILL STAY TIGHT..

...because it's locked with a PALNUT LOCK NUT

With an ordinary nut carrying the load, and a PALNUT to keep it tight—you have a powerful fastening team that locks severest vibration and stress. PALNUTS provide absolute security wherever bolt-and-nut assemblies must stay tight. Low in cost, light in weight, require small space, apply speedily with hand or power drivers. Full range of sizes, materials and finishes. Write for detailed literature.



DOUBLE LOCKING ACTION

Powerful spring tension (A-A) is exerted upward on the bolt threads and downward on the ordinary nut, while slotted jaws (B-B) close in and grip the bolt like a chuck.

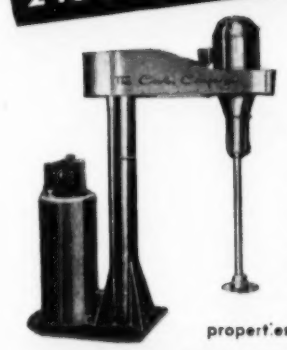
The PALNUT Co.
45 Cordier St., Irvington 11, N.J.

For more details circle NED-5902 on enclosed inquiry slip

True Solutions Colloidal Suspensions

2 to 20 Times Faster!

COWLES ULTRA-FAST DISSOLVER



Special designs to handle a wide range of batch sizes, chemical activity and viscosities are regularly produced under reasonable delivery schedules. But even the standard models—and there are 4 to choose—are engineered to the gallonage, viscosity, physical and chemical properties of the materials to be processed.

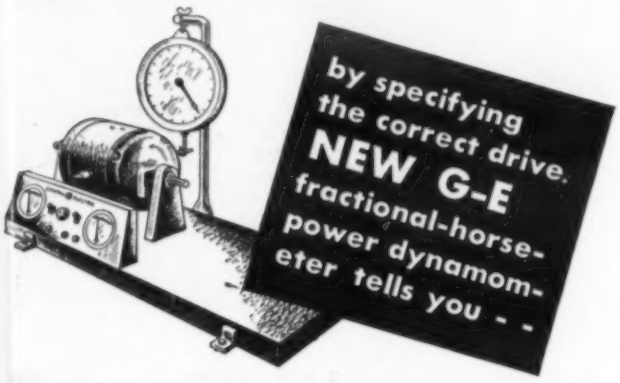
Saving up to 46½ hours per cycle — at rates 2 to 20 times faster than conventional mixers — the Cowles Ultra-Fast Dissolver will produce practically pure solutions and colloidal suspensions in amazingly short time. It will disintegrate and dissolve or disperse solids . . . disperse immiscible liquids . . . and dissolve or disperse gases in liquids.

Our engineers will gladly study your needs and make a recommendation or draw up specifications at no cost to you.

The Cowles Company INCORPORATED
118 TRACKSIDE, CAYUGA, N. Y.
Associates: Alexander Fleck, Ltd., Ottawa, Ont.
Shartle Bros. Machine Co., Division of Black Clawson Co., Middletown, Ohio

For more details circle NED-5903 on enclosed inquiry slip

here's a new way TO SAVE MONEY— IMPROVE YOUR PRODUCT



- Power requirements of appliances, fans, pumps, compressors, and other small machines
- Performance curves on small motors and generators

The price is a new low for dynamometer equipment, only $475.00 list.

Your nearest G-E office can give you complete information or write us for bulletin GEC-635, Apparatus Dept., General Electric Co., Schenectady, New York.

GENERAL ELECTRIC

687-41

For more details circle NED-5904 on enclosed inquiry slip

Heat it BETTER and FASTER for LESS!

with CHROMALOX Electric HEATING UNITS

USE CHROMALOX Electric HEATING UNITS for efficient and accurate heat to fit your EXACT needs!

Chromalox Heaters give you fast, uniform, "on the spot" heat at low initial cost and low operating costs in hundreds of applications. They come in types, sizes and capacities to fit every specific production need. Check their time and money saving advantages now! On-the-job engineering service without obligation.

For details on Chromalox Heaters

Send for the valuable, Informative Catalog 50. It lists many of the more than 15,000 types, sizes and ratings of Chromalox Electric Heaters for hundreds of uses.

EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

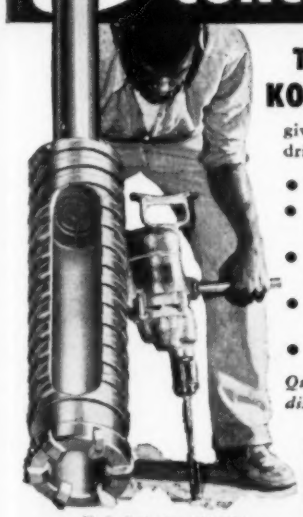
See other advertisement on page 4.

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-5905 on enclosed inquiry slip

The World's Most Efficient CONCRETE DRILL



THE TILDEN ROTARY KONKRETE KORE DRILL

gives lowest cost per foot of concrete drilled because it:

- Drills at 2 to 6 inches per minute
- Drills reinforcing bars and beams in concrete
- Drills up to 30 feet of concrete without resharpening
- Gives straight, clean holes for anchors, conduit, etc.
- Uses ordinary electric drill

Quiet cutting action gives minimum disturbance of surrounding activities.

U. S. Pat. No. 2506474

Tilden drill bits are available in standard sizes of from ¼" to 4" diameters. Quotations on larger sizes on request.

New, exclusive "centerless" design of drills from ¼" through 7/16" diameters is 3 to 4 times more efficient than ordinary pointed drills. Concrete is penetrated faster with 80% less pressure. Prices on these drills have been reduced by as much as 50%.

Write today for catalog with complete details on these revolutionary concrete drill bits.

TILDEN TOOL MANUFACTURING COMPANY

1995 NO. FAIR OAKS, PASADENA 3, CALIFORNIA

For more details circle NED-5906 on enclosed inquiry slip

New Literature—Continued

Mounted Wheels & Tools

Metal Removal Co.—8-page illustrated catalog 20 describes complete line of rotary abrasive and carbide production tools for use in tool and die shops, foundries, toolrooms and production plants. All shapes and sizes are listed and their prices given.

For more details circle NED-5907 on enclosed inquiry slip

Fractional Horsepower Motors

Bodine Electric Co.—More than 200 specifications to fit practically any fractional horsepower motor requirement are included in 29-page illustrated "Fractional Horsepower Motors" catalog. Types described include plain and speed reducer motors in all popular winding classifications.

For more details circle NED-5908 on enclosed inquiry slip

Insulation Tester

Associated Research, Inc.—Design, construction and application data on Hypot Junior portable instruments for high potential testing of electrical equipment for leakage, breakdown and shorts are covered in 4-page illustrated bulletin 4A. This compact tester plugs into any 110-v 60-cycle circuit.

For more details circle NED-5909 on enclosed inquiry slip

Power Screwdriver

Detroit Power Screwdriver Co.—40-page illustrated catalog describes various products that contribute to time and labor saving in assembly work. These include power screwdrivers with motorized hopper units, hopper units that can be adapted to presses and grinders, and nut-driving machine that eliminates manual handling.

For more details circle NED-5910 on enclosed inquiry slip

Welding Fittings

Midwest Piping & Supply Co.—184-page illustrated catalog No. 48 contains charts, tables, graphs, condensations and discussion of pipe specifications, welding data, design formulas and metallurgical information. Working dimensions of all welding fittings and fitting combinations are listed.

For more details circle NED-5911 on enclosed inquiry slip

Foundry Information

Whiting Corp.—Pocket-size handbook "Useful Information for Foundrymen" contains 42 pages of facts, figures, formulas, brick counts, fuel costs and illustrations to answer questions most frequently asked by foundrymen.

For more details circle NED-5912 on enclosed inquiry slip

General-Purpose Stapler

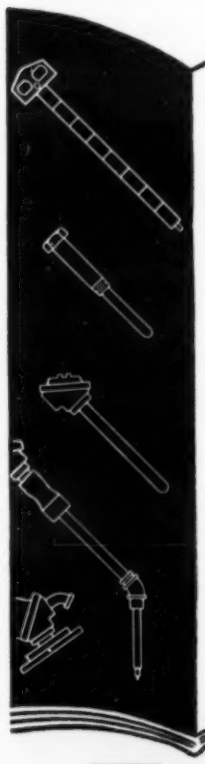
Saranac Machine Co. — 4-page illustrated bulletin No. 166 depicts general-purpose stapler for industrial use that cuts, forms and drives its own staples in one stroke direct from coil of standard wire.

For more details circle NED-5913 on enclosed inquiry slip

Spring Assortments

Peck Spring Co.—Spring assortments for general use or for use in emergencies are described in illustrated bulletin prepared for development and maintenance engineers.

For more details circle NED-5914 on enclosed inquiry slip



Save Money on Pyrometer Accessories

You save, first, by purchasing thermocouples and pyrometer accessories in large lots, benefiting from quantity discounts.

You save, second, by having adequate reserves always on hand, thus avoiding delivery delays which might be costly.

Investigate Bristol's "Team-Up" Pyrometer Supplies Plan. SEND FOR FREE 56-PAGE BUYERS' GUIDE AND USERS' MANUAL.

Bristol carries stock for immediate shipment in Waterbury, Conn., Chicago and San Francisco. THE BRISTOL COMPANY, 112 Bristol Road, Waterbury 20, Conn. (The Bristol Company of Canada, Ltd., Toronto, Ont.)

BRISTOL

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS

For more details circle NED-5915 on enclosed inquiry slip

IMPORTANT!

REDUCE FIRE LOSSES with ROCKWOOD triple-action SG-48 WaterFOG NOZZLES

Improve your fire protection now by installing throughout your plant, Rockwood triple-action WaterFOG Nozzles. They give ordinary water greater fire extinguishing power and will out-perform any other fog nozzles operating on either high or low water pressures.

Rockwood WaterFOG Nozzles are light in weight and are easier to handle in action. This modern nozzle discharges 1. high velocity WaterFOG 2. straight stream 3. low velocity WaterFOG from extension applicator which can be easily inserted in place of the high velocity WaterFOG tip. Provides firemen with greater protection and fire fighting efficiency.

Approved by Underwriters' Laboratories, Inc. and Factory Mutual Laboratories. Ask for bulletin C-501R.

ROCKWOOD SPRINKLER CO.

44 HARLOW STREET WORCESTER 5, MASS.

For more details circle NED-5916 on enclosed inquiry slip

EXCLUSIVE Rawson Clutch-Coupling FEATURES

A COMBINATION OF OUTER AND INNER SHOES

Outer shoes for starting capacity—inner shoes for overload protection—the combination controls acceleration period, with across-the-line starting.

GREATEST RANGE—

Only the RAWSON is available from fraction to 1200 horse power

SPRING CONTROL SHOE ACTION

Used on dual drives for independent operation from either side—and on engines to permit warm-up, free of load.

RUGGED CONSTRUCTION

Average shoe life is three years. Operates perfectly at extreme temperatures—no liquid to vaporize—no diaphragm to distort—predetermined engagement speed remains constant—no slip at synchronous speed.

ON-THE-JOB ADJUSTMENT

Unit does not have to be returned to the factory—adjustments for different capacities are easily made.

THERE'S A RAWSON FOR EVERY DRIVE NEED

CONSULTATION INVITED

Consultation is invited on any starting or drive problem no matter how severe. The Rawson can, in nearly every case, be accommodated to the need, at considerable saving in first cost and improved electrical efficiency.

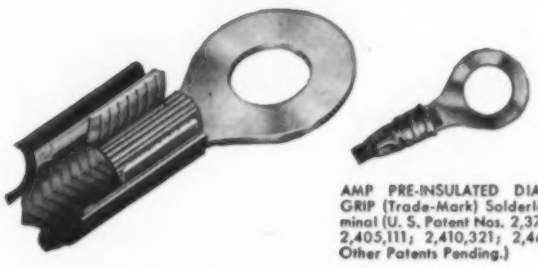
Send For Bulletin

CENTRIC CLUTCH COMPANY

26 SOUTH AVENUE, WEST CRANFORD, NEW JERSEY

For more details circle NED-5917 on enclosed inquiry slip

This AMP terminal is already insulated!



AMP PRE-INSULATED DIAMOND GRIP (Trade-Mark) Solderless terminal (U. S. Patent Nos. 2,379,567; 2,405,111; 2,410,321; 2,468,169. Other Patents Pending.)

ONE QUICK STROKE OF A TOOL OR PRESS AND YOUR COMPLETE INSTALLATION JOB IS DONE!

No need to stock terminals *and* tubing. Cuts costs of materials and labor, speeds production, and improves the quality of connection both electrically and mechanically. Terminal is made of pure copper electro-tinned for corrosion resistance. Special dielectric plastic sheath cannot slip or be removed. Color coded in wire size ranges from #22 to #10.

AMP AIRCRAFT-MARINE PRODUCTS INC.
1317 N. 4th Street • Harrisburg, Penna.
Canadian Representative: R. M. Hutcheson, 10 Nordale Crescent, Hardington, P. O., Toronto 15, Ont., Canada.
AMP Trade-Mark Reg. U. S. Pat. Office Elgin 5647

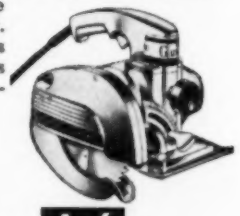
For more details circle NED-5922 on enclosed inquiry slip

2 Great New Features in 2 Great Saws . . .

PORTER-CABLE Guild

The SAW VALUE of the YEAR!

Always leaders in quality and value, these great Guild Saws are new more than ever in a class by themselves with sensational new features—*at no increase in price.* The new built-in tilting adjustment has an accurate, easy-to-read quadrant giving angle-settings to 45°. The depth regulator works by a mere twist of the Depth Adjustment Knob, dropping or raising saw base to desired position in a moment. And with these new improvements go all the other quality features that give Guild Saws their tremendous popularity.



Superior Features From A to Z

Highest quality ball bearings on jackshaft and armature • Lightness for easy maneuvering • Special vent blows sawdust away from operator • Super speed through 3200 RPM (full load) motor • Extra safety through right-hand blade • Protection through non-clog swing guard • Full depth cuts (2" in A-6—2⅞" in A-8) • Saw lumber, plywood, compo-board, aluminum siding • Abrasive wheel cuts metal, scores brick and tile • Perfect balance with grip over center of gravity • Helical gear drive delivers 11% more power to blade • Exclusive air jet clears sawdust from cutting line. Both models guaranteed.

A-6 Still only $65.

A-8 Still only $87.

See these great saw values at your Guild Tool dealer's today. Or write for full information.

PORTER-CABLE MACHINE CO.
2708 N. Salina St., Syracuse 8, N. Y.
Manufacturers of SPEEDMATIC and GUILD Electric Tools
In Canada Write: Strongridge Ltd., St. Catharines, Ont.

For more details circle NED-5923 on enclosed inquiry slip

New Literature—Continued

Interchangeable Punches

How Hercules interchangeable punch system can be adapted to almost any pierced product is illustrated and explained in catalog No. 103. Recent additions of larger sizes to series of standard square retainers, full range of high-speed round interchangeable punches and die buttons are covered. Catalog available by writing on company letterhead to United Drill & Tool Corp., Whitman & Barnes Div., Plymouth, Mich.

For more details circle NED-5924 on enclosed inquiry slip

Flotation Agents

Hercules Powder Co.—16-page illustrated brochure "Flotation" is devoted to description of flotation process and functions flotation agents serve. Included is group of mathematical formulas widely used in operation and control of ore-dressing mills.

For more details circle NED-5925 on enclosed inquiry slip

Steel Grating & Steps

Blaw-Knox Co., Blaw-Knox Div.—8-page illustrated bulletin 2328 tells how fusion of twisted crossbars and serrated bearing bars into one-piece steel grating by electroforging process increases strength of metal and provides nonslip surface.

For more details circle NED-5926 on enclosed inquiry slip

Electromagnetic Units

Arma Corp. — 12-page illustrated booklet "Synchro Units" describes two groups of electromagnetic units for transmitting electrically by means of single-phase alternating current a continuous accurate indication of angular position.

For more details circle NED-5927 on enclosed inquiry slip

General-Purpose Lathe

Hardinge Brothers, Inc.—Features and specifications of new 10-in. general-purpose lathe are contained in 6-page illustrated bulletin HL. Full-bearing carriage is employed to form solid foundation for cutting tool.

For more details circle NED-5928 on enclosed inquiry slip

Underfloor Electrical Distribution

National Electric Products Corp.—36-page illustrated catalog No. 606 depicts and describes Nepcoduct steel underfloor electrical raceway system for either new construction or modernization of commercial and industrial structures.

For more details circle NED-5929 on enclosed inquiry slip

Notching Units

Wales-Strippit Corp.—20-page illustrated catalog N describes independent and self-contained corner and edge notching units for interchangeable use in unlimited setups in stamping presses and press brakes.

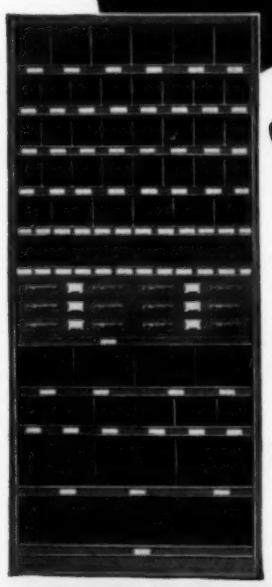
For more details circle NED-5930 on enclosed inquiry slip

Nut Retainers

Tinnerman Products, Inc.—Forty-nine stock sizes of Speed Grip Nut Retainers for fastening square nuts to sheet metal parts are described in 8-page illustrated bulletin No. 245-3 which also lists screw size and all dimensions.

For more details circle NED-5931 on enclosed inquiry slip

Protect small parts • speed up handling • save floor space with



BERGER FLEXI-BILT STORAGE UNITS

Flexi-Bilt Storage Units are designed to provide individual, indexed, easily adjustable small bins of varying sizes. Use them to make small parts, fittings, bolts, screws, tools, etc., readily accessible. Berger Flexi-Bilt Units can be tailored to fit every need . . . many bin combinations are possible. Drawer units are available as inserts. Construction is all steel, with exclusive *boltless* dividers. They are inexpensive and their uses are unlimited. Model F-18, illustrated, gives you a total of 188 bins—drawer units total 120 compartments. Overall size is 84" high, 36" wide and 12" deep. Write today for complete information and prices.

BERGER MANUFACTURING DIVISION
REPUBLIC STEEL CORPORATION • • • • CANTON 5, OHIO

For more details circle NED-5932 on enclosed inquiry slip

New Possibilities IN GRINDING TUNGSTEN CARBIDE

VISUAL GRIND Combines 3 Different Techniques..

Image Grinding

Profile Grinding

Templet Grinding

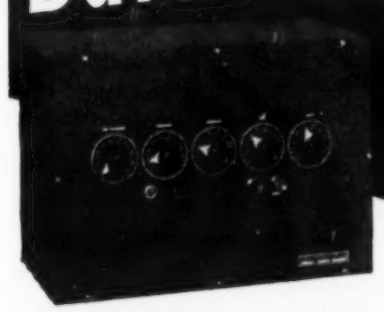
New, but proven, Visual-Grind combines the image, profile and templet techniques in one machine, greatly broadening the scope of contour grinding. Carbide tungsten work-pieces, heretofore most difficult, are easily handled. The image technique readily grinds work-pieces whose shank diameters are larger than the contour ends. The templet method handles jobs too large to magnify on the screen. New possibilities . . . enormous savings . . . extreme accuracy!

Ask for Bulletin N-8

VISUAL GRIND THE CLEVELAND GRINDING MACHINE CO.
6514 ST. CLAIR AVENUE • CLEVELAND 3, OHIO

For more details circle NED-5933 on enclosed inquiry slip

Automatic Batch Counter



Counts tens, dozens, hundreds or any predetermined quantity and automatically controls marking, separating or packaging equipment.

MONITOR *Automatic* BATCH COUNTERS

Monitor Electric Batch Counter, *counts any BATCH Quantity* of parts, packages, sheets, measurements or operations *and automatically controls* Batch Marking or separating devices, pile changers, kick out devices, conveyors, etc., *without slowing down production or missing a single count.*

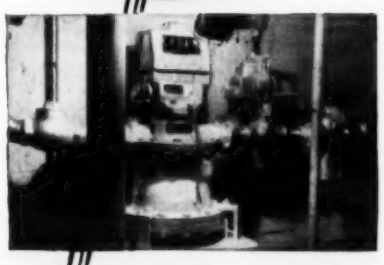
Proved thru more than ten years use. Extremely adaptable. Tell us what you want to do or send for Bul. MBC-52.

8 pages of Batch Counting Case Histories, application information, etc. Send for Bul. MBC-52.

Production Instrument Company
700-12 W. JACKSON BLVD., CHICAGO 6, ILL.
Representatives in Principal Cities

For more details circle NED-5934 on enclosed inquiry slip

STOP LIQUID PROCESSING WASTE!



Every 24 hours this stainless steel Bowser meter accurately measures 6,500 gallons of liquid alum into the beaters in a large paper mill.

Time-wasting, inaccurate tank gaging methods have been replaced in many plants by Bowser Xacto meters. This streamlining of liquid processing operations has increased production with less labor, space and capital investment. And by eliminating human errors, predetermined measurement with Xacto meters has GUARANTEED UNIFORMITY OF PRODUCT!

Perhaps a survey of your plant's present liquid processing methods by a Bowser engineer would disclose similar advantages. Please write today and set a date.

BOWSER, INC., 1381 Creighton Ave., Fort Wayne 2, Ind.
LIQUID CONTROL SPECIALISTS SINCE 1885

For more details circle NED-5935 on enclosed inquiry slip

Handler tiers drum in storage.

NEW...

ELWELL-PARKER Drum Handler

Speeds Work, Saves Space

You can transport and stack filled drums *faster* with this latest attachment for E-P fork trucks. By tiering drums *without* pallets, it will *save your space.* Also, this handler is ideal as a *pallet loader*—to assemble drums in multiples upon pallets which are then carried by other fork trucks or on trailers for tractor delivery.

Send For Data on this New Drum Handler.

THE ELWELL-PARKER ELECTRIC CO.

4095 St. Clair Avenue • Cleveland 3, Ohio

For more details circle NED-5936 on enclosed inquiry slip

HIGH VACUUM *Plumbing* BY DPi

WHEN you call upon DPi to set up a high vacuum system, you know that the job is being handled by high vacuum engineers with the most advanced technical knowledge in the field. They'll furnish you with the vacuum pumps best suited to your needs: *They'll select and install the "exactly right" accessories for every spot in the system.*

Soundly built accessories are vital. It may be a properly designed baffle to prevent back-streaming oil from entering the system—to return the condensed oil to the pump. Perhaps it's a high vacuum valve, designed for minimum obstruction to gas flow. Or . . . valves for lower vacuum applications . . . combined baffles and valves . . . flexible metal connectors. DPi stocks them all in a great variety of sizes and types.

Write today, outlining your high vacuum needs. Your inquiry will receive prompt attention.

DPi HIGH VACUUM RESEARCH AND ENGINEERING

VACUUM EQUIPMENT DEPARTMENT

DISTILLATION PRODUCTS *industries*

763 Ridge Road West, Rochester 3, N. Y.

DIVISION OF EASTMAN KODAK COMPANY

For more details circle NED-5937 on enclosed inquiry slip

New Literature—Continued

Panel Ventilation Filter

Dollinger Corp.—Complete data on WKE dry panel ventilation filter is presented in 8-page illustrated bulletin form No. DPF-100. Constructed for heavy-duty use, filter is available in number of standard sizes and has fins 2, 4 or 8-in. deep.

For more details circle NED-5938 on enclosed inquiry slip

Squirrel-cage Motors

Star-Kimble Electric Co.—Speed-torque curves at varying full-load torque percentages for three different types of dripproof polyphase squirrel-cage motors are shown in 4-page illustrated bulletin No. B-201. Also depicted are construction details of these ½ to 600-hp units.

For more details circle NED-5939 on enclosed inquiry slip

Centrifugal Pumps

Eastern Industries, Inc.—Complete engineering data, diagrams and suggestions on use of centrifugal pumps for industrial applications are given in 12-page illustrated bulletin No. 100. More than 100 close-coupled models are available to cover range of 0 to 70 psi and 0 to 70 gpm.

For more details circle NED-5940 on enclosed inquiry slip

Hydraulic Crane Scales

A. H. Henry Co.—Illustrated bulletin No. 501 consolidates information on uses, advantages and construction of hydraulic crane scales for measuring loads while in transit. Included is section on remote load indicating or printing system which allows weights to be read and recorded at distances up to 1000 ft from scale.

For more details circle NED-5941 on enclosed inquiry slip

Air Powered Pumps

Milton Roy Co.—Applications, advantages and working latitudes of aiROYmetric and aiROY air-cylinder powered chemical pumps, automatic chemical feed systems and automatic hydrostatic test pressure systems are depicted in 16-page illustrated bulletin No. 450.

For more details circle NED-5942 on enclosed inquiry slip

Rotary Pumps

Blackmer Pump Co.—Design, construction, maintenance, operation and application of rotary pumps are covered in 6-page bulletin entitled "Facts". Details of sliding and swing vanes with selection table for specifying equipment are given also.

For more details circle NED-5943 on enclosed inquiry slip

Electrical Connectors

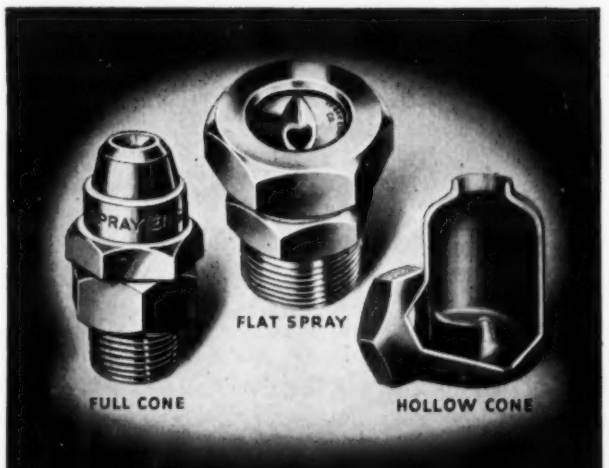
Burndy Engineering Co.—56-page illustrated pocket-size catalog P-52 contains tables and charts of code and wiring data, discussion of electrical connector requirements for most wire and cable sizes, and photographs of actual connector installations.

For more details circle NED-5944 on enclosed inquiry slip

Laminating & Gluing Equipment

Black Brother's Co.—"Black Brothers Laminating & Gluing Equipment" includes latest developments in line of spreaders, mixers, presses, heaters, clamps and other equipment. Photographs of existing installations show products in use by various fabricators.

For more details circle NED-5945 on enclosed inquiry slip



SPRACO NOZZLES

Write for NOZZLE CATALOG *to*

SPRAY ENGINEERING CO.

106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-5946 on enclosed inquiry slip

Fluid Power Improves Production

"LOGAN" AIR-DRAULIC® FEED-CONTROLLED CYLINDERS

• Power Movements in Any Direction
• No Power Unit Required

Combines the fast-acting, economical, low pressure operation of AIR with the smooth, uniform controlled regulation of OIL

Logan Air-Draulic Cylinders provide far more accurate, uniform action than any ordinary air cylinder. They can be furnished for controlled feed with rapid return in either direction, or in both directions. Skip feed movements can also be provided by means of a cam valve in hydraulic circuit.

5 STANDARD MOUNTING TYPES
Foot • Center Line • Blind End Flange • Round End Flange • Clevis

Standard bores from 3" to 8". Any stroke to 5'. For air pressures to 150 p.s.i.

*ENGINEERING SERVICE: Consult our engineers regarding type of cylinders best suited to your needs. No obligation.

FREE CATALOGS Write for your free copy of catalog No. 471. Contains full engineering data and diagrams.

Logan SAVES TIME • EFFORT • MOTION
Air and Hydraulic Equipment
LOGANSPORT MACHINE CO., INC. 808 Center Ave. Logansport, Ind.

FLUID POWER SPECIALISTS SINCE 1916

For more details circle NED-5947 on enclosed inquiry slip

PUT AIR TO WORK WITH PRESSURE PRINCESS

THIS portable single cylinder, piston type air compressor is a heavy duty, compact unit ideally suited for factory maintenance work. Equipped with spray hose and gun, it cuts time and cost of painting, inside and out. Handles any spray liquid. Compressor can be used for tire inflation and fleet lubrication and is suitable for many industrial purposes.

If your product incorporates an air compressor investigate the adaptability of Pressure Princess.

Write For Literature

THE CAMPBELL-HAUSFELD CO.

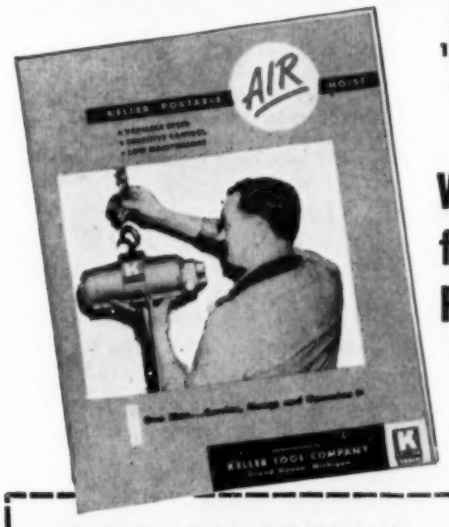
193 RAILROAD AVENUE HARRISON, OHIO

For more details circle NED-5948 on enclosed inquiry slip

EASILY PORTABLE *air* HOIST

For low cost lifting and lowering

300 • 500
1000 • 2000
POUND CAPACITIES



Write for this Folder

KELLER TOOL COMPANY
GRAND HAVEN, MICHIGAN
COMPANY
STREET
CITY STATE

For more details circle NED-5949 on enclosed inquiry slip

SHENANGO-PENN Centrifugal CASTINGS ... KEY TO SAVINGS

High Score

IN HIGH PRESSURE SERVICE

THE hydraulic cylinder pictured above gives 2-way assurance of exceptional life—despite repetitive pressures up to 3,000 psi.

Not only is it cast of tougher, stronger Meehanite Metal, but it's also a Shenango-Penn *centrifugal* casting. This in itself means a measurable gain in tensile strength . . . finer, pressure-dense grain . . . superior wear resistance . . . freedom from defects . . . and, very important in pressure work, avoidance of porosity. The net result is exceptional life, dependable performance, low-cost service!

Shenango-Penn centrifugal casting techniques, *the result of specialization for years,* offer decided advantages in symmetrical and annular parts of every description. They can be supplied in *various* metals, ferrous and non-ferrous . . . rough, semi or finish machined as you wish. You'll be time and money ahead.

SEND FOR FREE BULLETINS
SHENANGO-PENN MOLD CO.
887 West Third Street Dover, Ohio
Executive Offices: Pittsburgh, Pa.

SHENANGO PENN

ALL RED BRONZES • MANGANESE BRONZES • ALUMINUM BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL

For more details circle NED-5950 on enclosed inquiry slip

SALES RECORDS

...smashed to smithereens by this airetool expander

There's an Airetool Tube Cleaner and Tube Expander for every type of tubular construction

This ball bearing type condenser tube expander has been a spectacular success ever since it was first designed two years ago. Every month it continues to smash all sales records. This popularity proves there is a real need for such a good product . . . and that AIRETOOL has again brought you a better tool.

SPECIAL CONSTRUCTION FEATURES

- Tapered rolls produce smooth unridged surfaces
- Ball bearing thrust eliminates friction drag
- Ball bearings can't get lost as they are encased in a special retainer
- Thrust load bears on ground raceways preventing bearing breakage and disintegration

Next time you're rolling condenser tubes give these AIRETOOL ball bearing type expanders a trial. The results will satisfy you perfectly. For full information, write The AIRETOOL Manufacturing Co., 308 S. Center St., Springfield, Ohio.

BRANCH OFFICES: New York, Philadelphia, Chicago, Houston, Tulsa, Baton Rouge

AIRETOOL
MANUFACTURING COMPANY
SPRINGFIELD, OHIO

For more details circle NED-5951 on enclosed inquiry slip

New Literature—Continued

V-Belts

Maurey Mfg. Corp., V-Belt Div.—6-page illustrated bulletin FHP-101 describes line of Mor-Grip V-belts for fractional horsepower transmission in 3L FO section, 4L FA and 5L FB section sizes; while 4-page illustrated bulletin MV-201 covers Mor-Grip multiple V-belts in A, B, C, D and E section sizes.

For more details circle NED-5952 on enclosed inquiry slip.

Electric Rotary Actuator

Airborne Accessories Corp.—Redesigned Trim Trol electric rotary actuator for use on either low voltage direct current or 110-v ac is described in 4-page illustrated bulletin No. 112. Unit can produce 350 lb-in. torque through 180-degree rotation and has static capacity exceeding 1500 lb-in.

For more details circle NED-5953 on enclosed inquiry slip

Plastic Molding Powders

Hercules Powder Co.—16-page illustrated booklet No. 500-114 discusses four cellulose acetate molding powders each of which can be obtained in several flow types and one self-extinguishing type suitable for use in applications where flame resistance must pass Underwriters' Laboratories tests.

For more details circle NED-5954 on enclosed inquiry slip

Crystal Dehydration

Sharples Corp.—Dehydration of wide variety of crystalline materials by using Super-D-Hydrator horizontal axis, perforated basket, centrifuge is explained in 8-page illustrated bulletin No. 1257.

For more details circle NED-5955 on enclosed inquiry slip

Chlorine Properties

Diamond Alkali Co.—Principal thermodynamic properties of chlorine are presented in convenient graph form by "Enthalpy-Temperature Diagram for Chlorine." Chart gives heat content of liquid, of saturated gas and of super-heated gas in temperature range of −40 to 560° F and in absolute pressure range of 15 to 1100 psi.

For more details circle NED-5956 on enclosed inquiry slip

Abrasive Blast Cleaning

American Wheelabrator & Equipment Corp.—"The Airless Wheelabrator. . . What It Is . . . and What It will Do" is a 24-page illustrated booklet that explains method of airless abrasive blast cleaning and application of process to metal cleaning, finishing and shot peening problems.

For more details circle NED-5957 on enclosed inquiry slip

Electric Arc Furnaces

Whiting Corp.—40-page illustrated catalog FY-168 discusses advantages and costs of using Hydro-Arc electric arc furnaces for melting metal. Design of electrode arms and clamps and method of electrode positioning is explained also.

For more details circle NED-5958 on enclosed inquiry slip

Pipeline Strainers

Yarnall-Waring Co. — Current data on ¼ to 3-in. screwed strainers and ½ to 5-in. flanged pipeline strainers are presented in 6-page illustrated bulletin S-203.

For more details circle NED-5959 on enclosed inquiry slip

SIL-VAR

1000° HIGH HEAT

T. M. REG. PAT. OFF.

ALUMINUM COATING

PROTECTS . . . . . PRESERVES

All Metal Surfaces and Equipment constantly subjected to abnormally High Temperatures.

SIL-VAR 1000° HIGH HEAT protects metal at temperatures up to 1200° F.

SIL-VAR 1000° HIGH HEAT meets and surpasses U. S. Navy Specification 52 P198.

SIL-VAR 1000° HIGH HEAT is ready mixed and applied by brush, spray or dip.

SIL-VAR 1000° HIGH HEAT, like all SERVICE INDUSTRIES Products, is sold on our liberal Trial Arrangement. We will ship a 5 gallon container on trial ($6.25 per gallon—FOB Phila.). Try one gallon and if not completely satisfied, return the balance, transportation prepaid, within 30 days and we will cancel the invoice. Also furnished in 1 gallon cans ($6.50—FOB Phila.) for test purposes. Save time, money, equipment. Send for your trial unit Today!

DEPARTMENT S
SERVICE INDUSTRIES
2103-05-07 E. Somerset St.
Philadelphia 34, Pa.

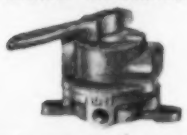
For more details circle NED-5960 on enclosed inquiry slip

HANNIFIN AIR CONTROL Valves

NEWEST TYPES! EXCLUSIVE DESIGNS for EVERY PURPOSE!

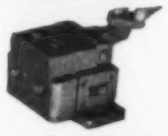
THE Hannifin line of Air Control Valves is complete—sizes and types for every purpose! Hannifin leads with newest, exclusive designs for fast, effortless control of air cylinders, presses, and other air operated equipment. Ask for recommendations.

"PACKLESS" HAND OPERATED



Simple, smooth-acting, positive 3-way or 4-way valves. "Packless" rotary disc type. Self-lapping. Sizes from ⅛" to 1¼". *Ask for Bulletin 57W.*

"EFFORTLESS" HAND OPERATED



Fast, new, finger-tip, pilot operated sliding disc valve. Effortless; air pressure does the work! For single or double acting cylinders. *Ask for Bulletin 241.*

"PACKLESS" FOOT OPERATED

Treadle type; leaves operator's hands free for other work. Tight-sealing, self-lapping, rotating bronze disc. Sizes ¼" up to ¾". *Ask for Bulletin 57W.*

"EFFORTLESS" FOOT OPERATED

Fast, new, pilot operated, disc type valve. Light, effortless action. Rugged construction. With or without pedal guard. *Ask for Bulletin 240.*

HANNIFIN CORPORATION
1127 South Kilbourn Avenue Chicago 24, Illinois

For more details circle NED-5961 on enclosed inquiry slip

BENCH SANDBLAST

For cleaning small parts, such as dies, tools, pistons, rings, etc.

Will operate on 5 h.p. garage air compressor.

Hands in rubber gloves rotate work in blast stream.

Fan draws dust into removable bags.

Vision provided by top lights.

THE W. W. SLY MANUFACTURING CO.
4748 Train Avenue Cleveland 2, Ohio

For more details circle NED-5962 on enclosed inquiry slip

Reduce Cost of Handling BARRELS

1 man

DRUMS

easily picks up containers weighing up to 800 pounds when he uses a—

SABIN BARREL TRUCK

The trucker runs truck up to container, hooks on at top, then pulls back on handle to pick up load. He needs no helpers—you save this cost. Exclusive Third Wheel Feature insures better balance and added safety in moving loads.

WRITE FOR BULLETIN No. 48-A

We also make . . .
KEG TRUCKS,
BOX TRUCKS,
BALE TRUCKS,
COIL TRUCKS,
CARBOY TRUCKS.

Special Trucks.

Ask for Bulletin No. 48

THE SABIN MACHINE CO.
6536 Carnegie Ave., Cleveland 3, Ohio

For more details circle NED-5963 on enclosed inquiry slip

Fastener Solves Problem of Liquid Seepage

Liquid seepage around bolts and studs often presents a difficult problem to the designer and maintenance man alike. But in many cases seepage can be eliminated by a simple change-over to ESNA Elastic Stop Nuts.

Frequently, self-locking Elastic Stop Nuts can be used without design changes—without changes in assembly or maintenance procedure—where you now use other types of nuts. Built in one piece with an elastic locking insert, Elastic Stop Nuts are applied to bolts or studs with standard nut runners. The famous Red Elastic Collar grips threads, *seals out liquids*, and *holds where it's set*, regardless of vibration or shock.

On machine tools, household appliances, portable tools, automotive and railroad equipment Elastic Stop Nuts every day solve fastening problems created by the effects of vibration. In addition Elastic Stop Nuts solve problems of: (1) pre-stressing bolts for proper load distribution (2) setting and maintaining proper spring-loaded adjustments (3) protecting bolt threads against corrosion (4) providing the feature of re-usability—without major design changes.

For a free bulletin on the uses of Elastic Stop Nuts write to Elastic Stop Nut Corporation of America, Union, N. J.

▲ For more details circle NED-5964 on enclosed inquiry slip ▲

TOTES MORE PAYLOAD at LESS COST . . .

LIGHT WEIGHT—Convoy Nesting Tote Box—weighs 50% to 60% less than steel . . . 2 cu. ft. size weighs only 7.2 lbs.

STRONG, DURABLE—Convoy Tote Boxes are made of chemically hardened corrugated board by an exclusive impregnation process . . . generally will support anything they will contain. Many of them have been in active daily use for more than two years. Armored rim for rigidity . . . strong, comfortable handholes.

LOW COST—Convoy Nesting Tote Box costs 50% to 60% less than steel . . . so inexpensive that they can be discarded when they finally become unserviceable.

More than 30 stock sizes of nesting boxes available now . . . write for details.

CONVOY, INC • P. O. STATION B, Box 216N • CANTON 6, OHIO

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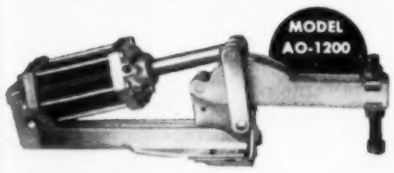
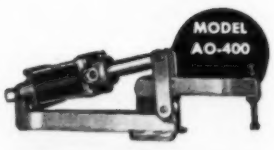
NOW

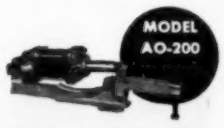
New air-operated clamps with toggle-bar force

from Feather-touch to **OVER A TON**

. . . another example of design leadership to provide simultaneous multiple clamping and solve your SPEED-PRODUCTION problems.







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Minneapolis 4, Minn., Midwest Mach. Tool Supply
New York 17, N. Y., V. A. Chern
Oakland, Calif., Bues Prod. Equip. Co.
Philadelphia, Pa., Jackson-Walter Co.
Seattle, Washington, Norwes Company
St. Louis, Missouri, Moehlenpah Engr. Inc.
Poland, Ohio, P. L. Duer

Send for new folder giving further information

KNU-VISE PRODUCTS **LAPEER MFG. CO.**
3056 DAVISON ROAD • LAPEER, MICHIGAN

Western Division, 422 Magnolia St., Glendale, Calif.
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P.O. Box 23, Hamilton, Ontario

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NBP CCA

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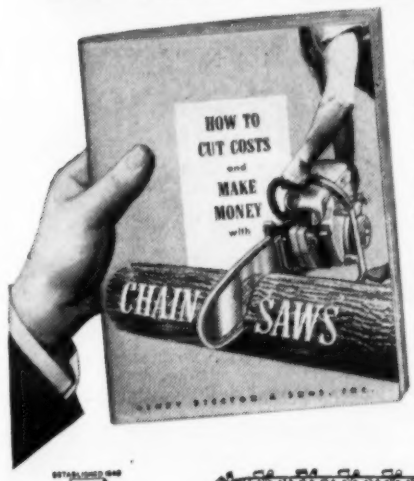

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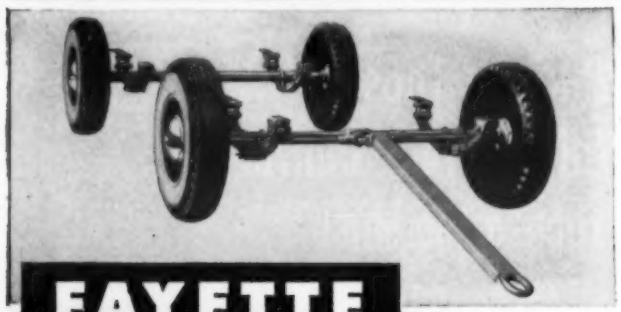

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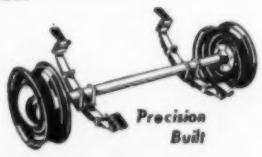

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Available in STROKE and ROTARY Models

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WITH INTERCHANGEABLE PARTS

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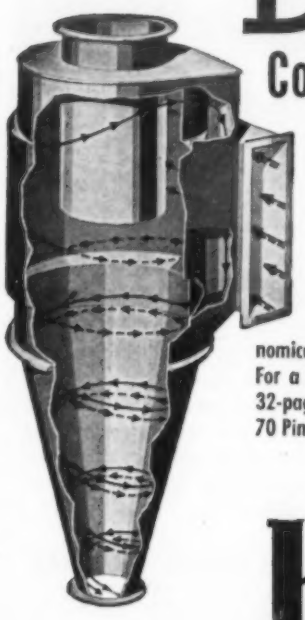

Every industrial engineer should know about the patented van Tongeren 'shave-off'. Exclusive in the Buell dust-collection system, it makes possible dust collection that is efficient yet economical. Buell design eliminates plugging. For a full description, write for the new 32-page catalog to: Buell Engineering Co., 70 Pine St., Suite 5022, New York 5, N. Y.

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VIBRATORY FEEDERS

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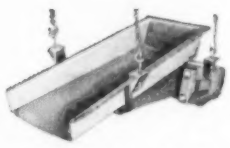
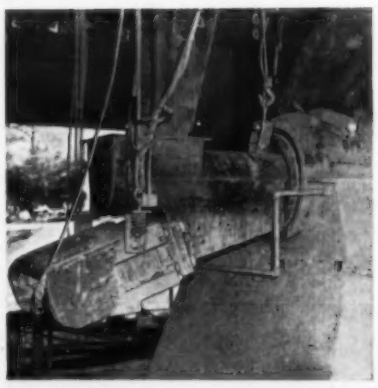


—by their ability to handle bulk materials, from light, fine powders to heavy, coarse chunks—hot or cold—dry or damp—by providing variable control of rate of flow to meet the capacities of dryers, screens, crushers, belt conveyors, etc.



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SYNTRON CO.
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Homer City, Pa.

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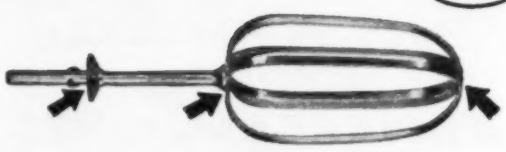
G.E. ELECTRIC MIXER BLADES ARE MADE WITH *EASY-FLO*



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Agents in Principal Cities. In Canada: HANDY & HARMAN of Canada, Ltd., Toronto

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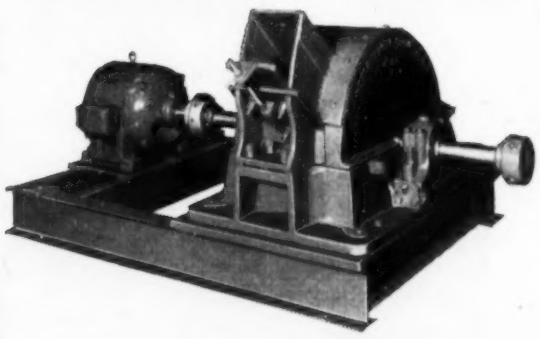
M&M DISPOSAL EQUIPMENT



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Get the most out of your Spraying Equipment with minimum power ... with efficient spraying.
Use Yarway Nozzles. No internal vanes or other restrictions to clog or hinder flow.
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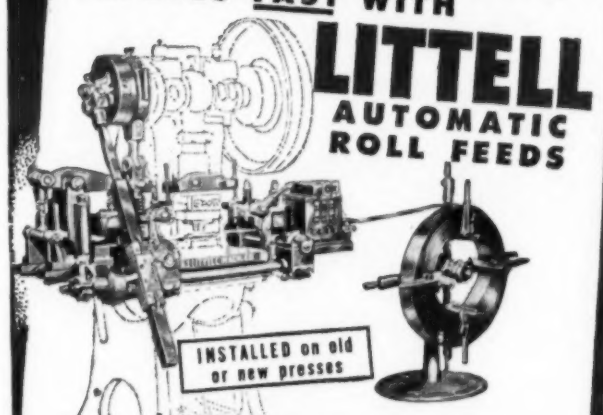

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3. MORE SAFETY ... The recognized protection Littell automatic feeding provides means safety for operators and lowered insurance rates.
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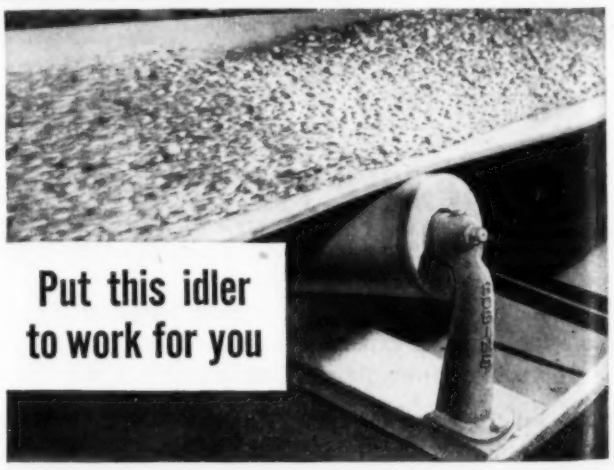

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ROBINS IDLERS

ROBINS CONVEYORS DIVISION
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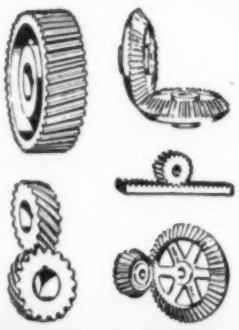

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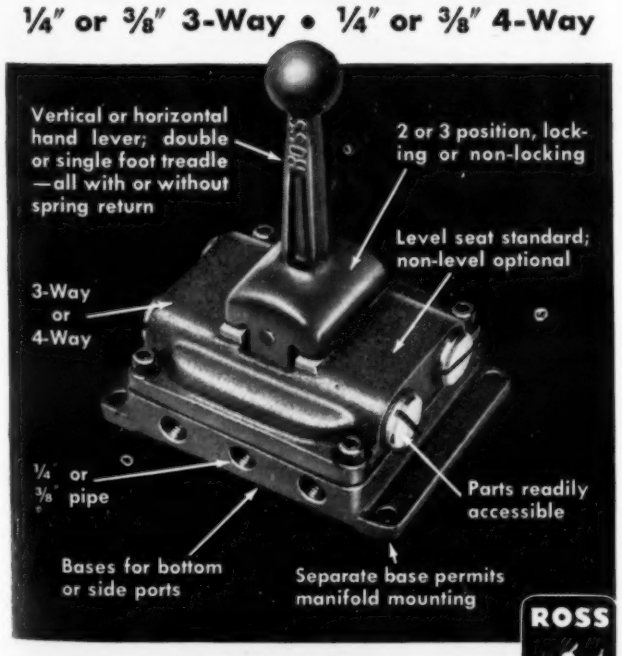

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ROSS OPERATING VALVE CO.
120 E GOLDEN GATE AVE DETROIT 3 MICHIGAN

For more details circle NED-5995 on enclosed inquiry slip

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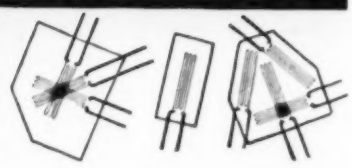

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5804

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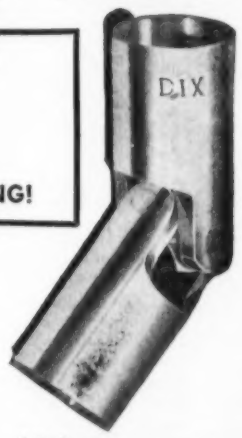

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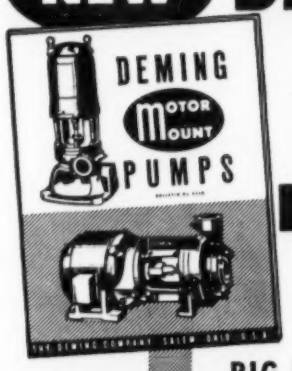

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• Fly-ball governor running in oil.
• Automotive-type float feed carburetor.
• Lauson original design provides direct stream of cool air over both valves simultaneously.
• Always choose Lauson engines — a better buy because they're better built!

The LAUSON Company
Dept. ND, New Holstein, Wisconsin • A Division of Hart-Carter Company
IN CANADA: HART-EMERSON LTD., WINNIPEG, CANADA

For more details circle NED-6000 on enclosed inquiry slip

Courtesy Ideal Models Co., Detroit, Mich.

for Model Kitchens!

Six versatile De-Sta-Co Toggle Clamps save in this simple, economical, plastics cementing fixture. The turntable more than doubles production . . . eliminates the cementing cycle "bottleneck."

These perfect reproductions are for a manufacturer of metal kitchens. This operation, cementing on tops, requires: Fast cementing cycle—positive clamping pressure for a perfect bond—precise alignment for accurate assembly.

De-Sta-Co No. 225-U fills these requirements. Completely retractable when opened for quick insertion and removal of work, it offers the rapid toggle action, positive holding pressure and accurate performance that make De-Sta-Co Toggle Clamps ideal "Model Tooling".

For your working-holding problems in Assembly, Welding, Bonding, Machining, Inspection . . . of any materials . . . tool up with these economical, efficient, high-production examples of "Model Tooling".

De-Sta-Co Toggle Clamp Catalog describes more than forty stationary and portable clamps. Write for your free copy today.

DETROIT STAMPING CO.
360 Midland Ave. • • Detroit 3, Mich.

For more details circle NED-6001 on enclosed inquiry slip

Uniform Belt Tension on Ryman Grinders Assured by NOPAK Cylinders and Valves...

Ryman specifies NOPAK Cylinders because they maintain a nearly constant friction in piston travel... the result of rigid standards in machining and assembly . . . assuring even belt tension at a given setting of the regulating valve.

NOPAK Valves are specified because their construction seals them against dust and grit abrasion, and because of the convenient, positive, cylinder control which they provide.

Consider NOPAK in your problems involving the application or control of Air or Fluid Power.

GALLAND-HENNING MFG. CO., 2755 S. 31ST ST., MILWAUKEE 46, WIS.

Write for Bulletin 100

Representatives in Principal Cities

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

For more details circle NED-6002 on enclosed inquiry slip

New Literature—Continued

Grinding & Drilling Tools

Dumore Co.—20-page illustrated catalog 50 gives complete buying and application information on line of tool-post and hand grinders, flexible-shaft tools, high-speed quills and high-speed drilling equipment. Recommendations are included as to work range and type of service for which each tool is best fitted.

For more details circle NED-6003 on enclosed inquiry slip

Fire Fighting Agents

Randolph Laboratories, Inc.—36-page pocket-size booklet "Fire Hazard Index" lists over 590 chemical, gas and common fire hazard materials and specifies which types of fire fighting agent to use on each as recommended by Board of Fire Underwriters and National Fire Protection Association.

For more details circle NED-6004 on enclosed inquiry slip

Casting Design

"Fundamentals of Casting Design as Influenced by Foundry Practice" by Oliver Smalley is 62-page book which offers specific and well illustrated examples of correct and incorrect design practice and series of definite rules to be followed. Price is $1.65. Obtainable directly from Meehanite Metal Corp., New Rochelle, N. Y.

For more details circle NED-6005 on enclosed inquiry slip

Heavy-Duty Bucket Loader

N. P. Nelson Iron Works, Inc.—Complete descriptions of model P-11 wheel-mounted and Q-11 crawler-mounted heavy-duty bucket loaders are presented in 8-page illustrated catalog form No. 501. Photographs show application of two machines to loading operations in various types of material.

For more details circle NED-6006 on enclosed inquiry slip

Threaded Blind Rivets

Problems of blind fastening or riveting and applications of Rivnut one-piece blind rivets with threads for attachment are covered in 20-page illustrated bulletin "Rivnuts." Data on strength requirements, selection, size and grip range are included. Available only to executives writing on company letterheads directed to B. F. Goodrich Co., Dept. E, 500 S. Main St., Akron, O.

For more details circle NED-6007 on enclosed inquiry slip

Isocyanate-Based Adhesives

Monsanto Chemical Co.—Comprehensive review of development and present practices in use of isocyanate-based adhesives is contained in 14-page technical bulletin No. P-145. Chemical and physical properties of two available di-isocyanates are covered, and formulations for bonding various combinations of materials are detailed.

For more details circle NED-6008 on enclosed inquiry slip

Flush Valves

Installation details, parts identification, piping design and manual of charts and instructions on flush valves are contained in handbook "Flush Valves." Flushboy, Presto, Marine and Turn-to-Silence flush valves and vacuum breakers are covered. Available only to those writing on company letterhead to Coyne & Delany Co., 834 Kent Ave., Brooklyn 5, N. Y.

For more details circle NED-6009 on enclosed inquiry slip

di-acro PUNCH

Now you can punch holes of various shapes as large as 4" diameter in 16 gauge steel—also blank, draw, emboss, form,—all with the new DI-ACRO Punch. It is ideal for both experimental and production work.

The precision ground triangular ram of this double purpose press prevents punch head from turning, assuring perfect alignment at all times.

A Turret Stripper of exclusive DI-ACRO design automatically strips material from punches of all shapes. Roller Bearing cam action develops 4-ton pressure with minimum effort. Adjustable gauges assure exact location of holes.

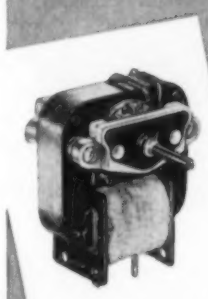
Send for "DIE-LESS DUPLICATING" Catalog
Gives the full story of the DI-ACRO Punch, and also DI-ACRO Benders, Brakes, Shears, Rod Parters, Notchers, as well as the new DI-ACRO Vari-O-Speed Powershear and Hydra-Power Bender.

DI-ACRO is pronounced "DIE-ACK-RO"

DI-ACRO PRECISION MACHINES DIE-LESS DUPLICATING
O'NEIL-IRWIN MFG. CO.
354 EIGHTH AVENUE • LAKE CITY, MINN.

For more details circle NED-6010 on enclosed inquiry slip

RAYTHEON
fractional hp MOTORS
CONCENTRATED POWER



"Count on Raytheon to run it." That's what design engineers are saying. They're the men who appreciate the Creative Craftsmanship that goes into Raytheon fractional hp motors. When you want to run things, FANS, BLOWERS, HEATING EQUIPMENT, appliances or what have you—count on Raytheon motors to do the job.

Type 230 Shaded 2-Pole Motor. For continuous duty without fan cooling. 1/200 to 1/50 hp at 3200 rpm Flat Speed Torque Curve and High Starting and Pull Up Torque are characteristic of all type 230 Raytheon motors. Write for Data Bulletin 1000.

RUSSELL ELECTRIC COMPANY
MOTOR DIVISION OF RAYTHEON MFG. CO.
4501 S. Western Blvd. • Dept. H-25 • Chicago 9, Ill.

For more details circle NED-6011 on enclosed inquiry slip

Here's an "8-Hour Day" Safety Goggle . . .

AO Plastic Goggle

it's LIGHT, ATTRACTIVE, COMFORTABLE

For day-long wear—day in and day out—the AO607 Goggle combines light weight, good looks and comfort with its safety function. It can be worn directly over eyes or spectacles for frontal protection on machine or hand tool work, chemical and physical lab work, bottling operations, spot welding, light grinding, chipping, and riveting. Comes with handsome leatherette case. Your nearest AO Safety Products Representative can supply you.

American Optical Company
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities

For more details circle NED-6012 on enclosed inquiry slip

HIGH VACUUM DATA YOURS FOR THE ASKING

For the first time in one cover, this 36-page book provides significant and valuable engineering data, practical solutions to vacuum problems; charts, graphs, and tables.

If you use high vacuum, this reference catalog is a "must" for your files. Copy sent on request, without cost or obligation.

Stokes MICROVAC Pumps combine simplicity, high volumetric efficiency, and lowest operating costs.

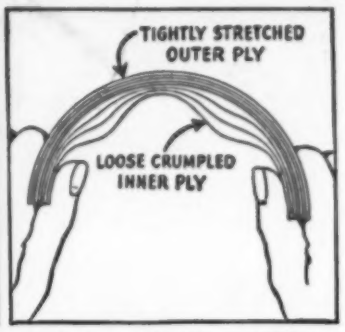
F. J. STOKES MACHINE CO.
5964 Tabor Road,
Philadelphia 20, Pa.

FJS

F. J. STOKES MACHINE COMPANY

For more details circle NED-6013 on enclosed inquiry slip

Condor Compensated BELT LASTS LONGER!



Outlasts Other Rubber Transmission Belts 3 to 4 Times

During manufacture, Manhattan *compensates* for the difference in tension between plies of the belt when rounding the pulleys. By *equalizing ply stresses*, the conditions (illustrated above) of loafing inner plies and over-worked outer plies are eliminated. Consequently, the causes of most belt failures—outer ply rupture, ply separation and fastener troubles—are also eliminated. Every ply in a Condor Compensated Belt pulls an equal share of the power transmission load. This is why users report up to 3 to 4 times longer life with Condor Compensated Belt over their previous belts.

Condor Compensated Belt is available with a selection of four driving surfaces for exact machine application. Send for Bulletin 6808 H.

RAYBESTOS-MANHATTAN, INC.
MANHATTAN RUBBER DIVISION, PASSAIC, NEW JERSEY

For more details circle NED-6014 on enclosed inquiry slip

DAV-SON CORK-BACKED BULLETIN BOARDS

DAV-SON indoor and outdoor style Bulletin Boards provide attractive displays for up-to-the-minute announcements and posters. Your choice of hardwood or metal frames, with or without locking glass doors, illuminated or non-illuminated.

"THE SAFETY DIRECTOR"

Flashing display is a constant warning to employees to avoid accidents. Changeable letters permit timely safety messages to be set up as often as required. Definite improvement in safety records has been noted in plants using "The Safety Director."

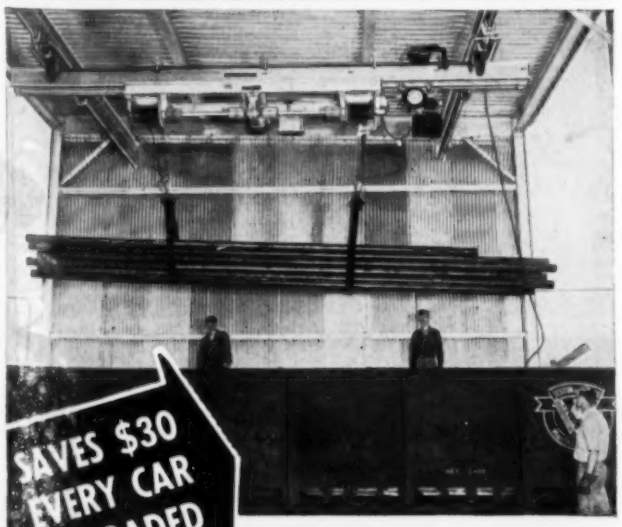
Write for complete information regarding DAV-SON — Cork Bulletin Boards and Directories and the famous "Safety Director."

DAV-SON

Ask for Bulletin "A"

A. C. DAVENPORT & SON, INC.
ESTABLISHED 1932
311 N. DESPLAINES ST., CHICAGO 6, ILL.

For more details circle NED-6015 on enclosed inquiry slip



SAVES $30 EVERY CAR UNLOADED

With a 2-ton American MonoTractor Crane System, carloads of pipe averaging 60,000 lbs. are unloaded at a saving of $30 a car.

Every American MonoRail Handling System pays and saves — we'll gladly send an engineer.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

For more details circle NED-6016 on enclosed inquiry slip

New Literature—Continued

Overhead Cable Conveyors

E. W. Buschman Co.—Specifications of standard stock units of Universal trolley cable conveyor are given in 2-page illustrated bulletin 41. Units allow field erection of overhead trolley conveyor without welding and at minimum cost.

For more details circle NED-6017 on enclosed inquiry slip

Adjustable Lighting Fixtures

O. C. White Co.—44-page illustrated 1950 catalog of adjustable lighting fixtures lists many types of industrial, professional and office fixtures including bench, ceiling, conduit, clamp-on and portable units having incandescent or fluorescent lamps.

For more details circle NED-6018 on enclosed inquiry slip

Cycloidal Vacuum Pumps

Roots-Connersville Blower Corp.—12-page illustrated bulletin 50-B-13 covers cycloidal vacuum pumps designed especially for heavy-duty suction service. Positive-displacement unit is capable of producing vacuums from 4 to 26-in. Hg with high volumetric efficiency.

For more details circle NED-6019 on enclosed inquiry slip

Positive Displacement Pumps

Eastern Industries, Inc.—12-page illustrated bulletin No. 200 contains information on positive pressure vane and gear pumps which are close-coupled and move nonlubricating liquids at high pressures. Vane type operates at up to 60 psi and gear pumps to 200 psi.

For more details circle NED-6020 on enclosed inquiry slip

Corrugated Cans

Witt Cornice Co.—32-page illustrated general catalog No. 63 depicts heavy duty cans and pails; underground garbage receivers; oily waste, roller, refuse and special cans; mopping pails and universal can dolly. Sizes, weights, capacities and shipping data are included.

For more details circle NED-6021 on enclosed inquiry slip

Centrifugal Pumps

Deming Co.—Illustrated bulletin No. 4350 explains how Motor-Mount vertical and horizontal centrifugal pumps can be mounted on any motor which has NEMA type C mounting flange. Capacities range up to 200 gpm; heads up to 165 ft; motors from ¼ to 7½ hp; total pressure to 125 psi; and maximum suction to 50 psi.

For more details circle NED-6022 on enclosed inquiry slip

Plywood

United States Plywood Corp.—Many new woods and grades of plywood now available are described in 40-page illustrated 1950 Weldwood catalog which lists 66 of company's products.

For more details circle NED-6023 on enclosed inquiry slip

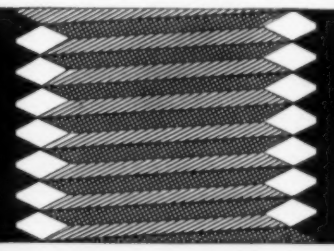
Flow Meters

Republic Flow Meters Co.—32-page illustrated data book No. 702 discusses various flow measurement problems and their solution. Meter bodies, differential devices and reading instruments are described; and special section is devoted to wide range and reverse flow equipment.

For more details circle NED-6024 on enclosed inquiry slip

DESIGNERS CAN PREVENT SCREW THREAD TROUBLES WITH HELI-COIL® INSERTS...

ELIMINATE screw thread problems easily and economically with Heli-Coil Inserts of precision-formed stainless steel or phosphor bronze wire. They prevent abrasion, corrosion, seizure...they permanently protect threads against wear or stripping.



Heli-Coil Inserts permit design economies by saving weight and space . . . they improve any product on which they are used. They cut labor costs . . . make assembly easier . . . put added sales appeal into the product . . . eliminate thread failures.

Use Heli-Coil Inserts in all metals, plastics, ceramics and wood.

Write today for prices and detailed information.

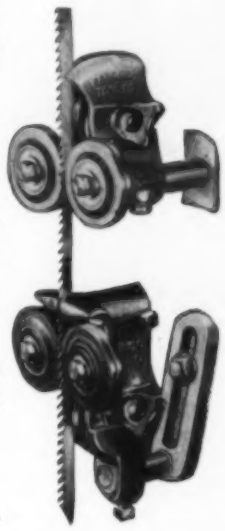
HELI-COIL CORPORATION
47-60 Thirty-Fifth Street,
Long Island City 1, N.Y.

For more details circle NED-6025 on enclosed inquiry slip

MORE SPEED MORE SUPPORT

The SOLUTION to SLOW Band Saw Production

INSTALL PADDOCK BALL-BEARING BAND SAW GUIDES



Needless blade breakage stops! More materials can be cut! Production increases! Safer for workmen! Interchangeable ball-bearing wheels, running with the blade, give strong, friction-free support to the working portion of the blades. Makes old band-saws work better—makes new band-saws more efficient! Write for details, prices and circulars.

PADDOCK TOOL CO.
1418 Walnut Street, Kansas City 6, Mo.
Guide Makers Since 1920

Paddock BALL-BEARING BAND SAW GUIDES

For more details circle NED-6026 on enclosed inquiry slip

IMMEDIATE DELIVERY

BAY STACKING BOXES

ACCEPTED AND USED BY LEADING MFGRS.

Perfect for handling small parts. Open front makes contents easily accessible when boxes are stacked. Rigid handle on back on bin. Will stack with style 600 stacking box of same length and width.

Product Number	Width	Length	Height	Gauge Steel	Price Plain	Price Green
501-18	10"	16"	6"	18	$1.60	$1.75
502-16	12"	18"	8"	16	$2.40	$2.65

ALL PRICES F.O.B. FACTORY

PHONE • WIRE • WRITE
Phone: BAldwin 9-1805

BAY METAL PRODUCTS
3009 N. 16TH ST. PHILADELPHIA 32, Pa.

For more details circle NED-6027 on enclosed inquiry slip

SPEED YOUR PRODUCTION

with STONHARD RESURFACER

Keep your traffic moving! Don't let it bog down because of worn and rutted floors.

STONHARD RESURFACER will help you to keep your factory floors in first-class shape by eliminating ruts and holes, thereby permitting traffic to flow uninterruptedly. Worn and rutted floors are the cause of injury to personnel, production delays, and damage to merchandise.

STONHARD RESURFACER, suitable for patching or for a complete overlay, has wide use in American industry. It can do the same excellent job at your plant. A FREE folder descriptive of the material and its use will be sent to you upon request.

STONHARD COMPANY
Building Maintenance Materials Since 1922
101 STONHARD BLDG., 1306 SPRING GARDEN STREET
PHILADELPHIA 23, PENNA.

Send your RESURFACER folder to: 101/8/50

Firm .....
Name ..... Title .....
Address .....
City ..... Zone ..... State .....

For more details circle NED-6028 on enclosed inquiry slip

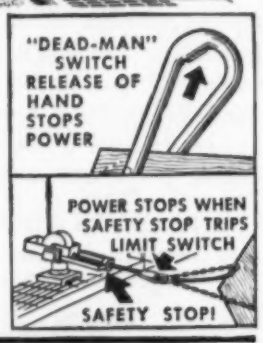
ANOTHER Stearns FIRST!
MAGNETIC CLUTCH CONTROLLED
POWER SHOVELS!

HERE'S the answer to safe, fast and efficient unloading of bulk materials from box cars — The STEARNS Magnetic Clutch Controlled Power Shovel.

A one-man shovel completely controlled by the man in the car, safer operations result for when pressure is released on "dead-man" switch, the scoop stops. Second safety feature—the scoop automatically stops when safety stop trips limit switch.

Bulletin 250-A gives full information. Write today.

Patents Pending



Stearns MAGNETIC MANUFACTURING CO.
653 S. 28th St., Milwaukee 46, Wis.

For more details circle NED-6029 on enclosed inquiry slip

Cut Production Costs on small Precision Parts with Atlas 10" Lathes

Handle the work big lathes can't do economically

The low-priced Atlas "Quick-Change" 10" Lathe is tops in the shop —for precision work and economy. With 10" swing (6⅝" over carriage), 24" and 36" between centers, and 16 spindle speeds from 28 to 2072 RPM, it has the capacity for most small parts operations — and it's much cheaper to run than bigger lathes.

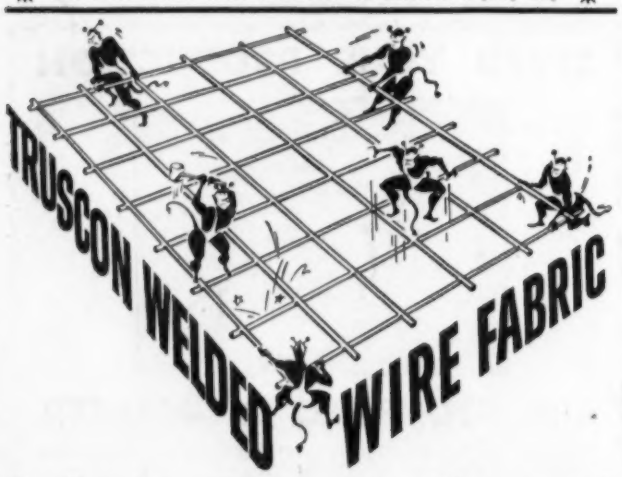
Instant selection of 54 threads and feeds saves set-up time, speeds production. And with its heavy, massive construction, precision-ground ways, and Timken Tapered Roller Bearings, the Atlas is an accurate, smooth-operating lathe that is ideal for both 'round-the-clock production and tool room use.

Atlas standard 10" lathes start at $212.00 F.O.B., Kalamazoo — "Quick-Change" at $272.00. Send for latest catalog with complete facts.

ATLAS PRESS CO.
823 N. Pitcher St., Kalamazoo, Mich.

MATCHED PRECISION TOOLS FOR WOODWORKING AND METALWORKING

For more details circle NED-6030 on enclosed inquiry slip



Defiant to Destructive Elements!

● Every square foot of Truscon Welded Wire Fabric is built to fight the factors of concrete pavement disintegration: traffic loads; variations in temperature and moisture content; non-uniform settlement of subgrade; and volumetric changes in the subgrade itself.

Great stretches of heavily-traveled American highways are assured long life and low upkeep by Truscon Welded Wire Fabric and other Truscon Steel Reinforcing Products. The engineers and designers on these projects have found by experience, practice and research that Truscon Welded Wire Fabric offers many concrete-saving advantages. Write for FREE illustrated literature.

TRUSCON STEEL COMPANY • Youngstown 1, Ohio
Subsidiary of Republic Steel Corporation

TRUSCON WELDED WIRE FABRIC Covers the Continent

For more details circle NED-6031 on enclosed inquiry slip

New Processes & Materials

STAINLESS STEEL TUBING withstands severe cold forming

Developed to overcome fabricating difficulties caused by rapid work-hardening of conventional 18-8 stainless steels, No. 10 stainless steel is recommended for tubular parts requiring severe forming, bending, spinning, coining, extruding and upsetting. Analysis is 0.08 per cent maximum carbon, 16 per cent chromium and 18 per cent nickel. It can be brazed or soldered satisfactorily after cold working, and its applications include use for flexible hose, integral finned tube, heavy lapped Van Stone flanges with stub ends and spun-end thermocouples. Round tubes can be obtained in all sizes and standard gages up to 1⅝ in. OD. Made by **Carpenter Steel Co.**, Alloy Tube Div., 118 Springfield Rd., Union, N. J.

For more details circle NED-6032 on enclosed inquiry slip

BONDING AGENT is colorless on application

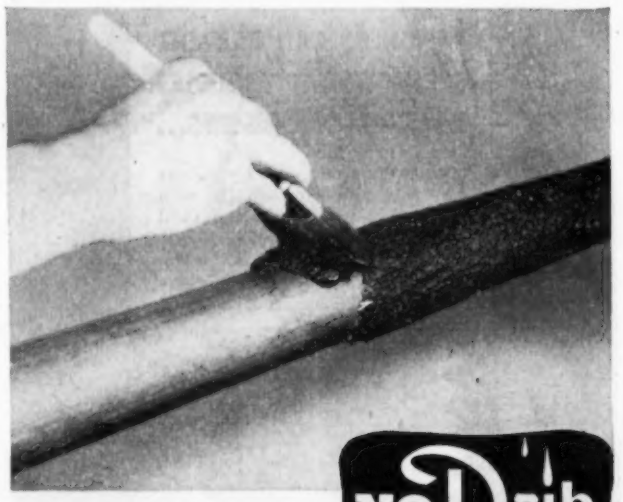
Chemically inert to concentrated acids and alkalies at room temperature, Bonding Agent R-313 is anhydrous thermosetting compound. It has excellent electrical properties, compressive strength of 14,000 psi, flexural strength of 7000 psi and shear strength of 2500 psi. It withstands heat in range of −100 to 400° F. Made by **Carl H. Biggs Co.**, Dept. B, 11616 W. Pico Blvd., West Los Angeles, Calif.

For more details circle NED-6033 on enclosed inquiry slip

INDUSTRIAL CLOTHING has high resistance to chemicals

Industrial clothing made of Union Carbide's Vinyon N yarn fabric has been found to have high degree of resistance to destructive chemicals at concentrations widely used in industry. At right of illustration are shown cotton trousers which were used 1 week in heavy metal chloride service, washed once and practically disintegrated. On left, trousers made from this yarn were used over 3 months in same service with regular weekly washings and are still in use. Resistance of clothing made from this material is inherent in fiber. Though fabric is not treated, it is fire-resistant and will not support combustion. Coveralls, laboratory coats, jackets and matched shirts and trousers can be obtained in all conventional sizes. Made by **Chem-Wear Inc.**, 740 Broadway, New York 3, N. Y.

For more details circle NED-6034 on enclosed inquiry slip



NoDrip

COVER PIPES TANKS, WALLS

Anyone can brush, trowel or spray NoDrip on any clean, dry surface. Goes on like plaster, forms a seamless, protective coating, *STOPS CONDENSATION DRIP.*

NoDrip keeps equipment and floors safe and dry; prevents corrosion of metal and prolongs its life. Acid, alkali and brine resistant. Comes in 1, 5 and 55 gal. drums, ready for use.

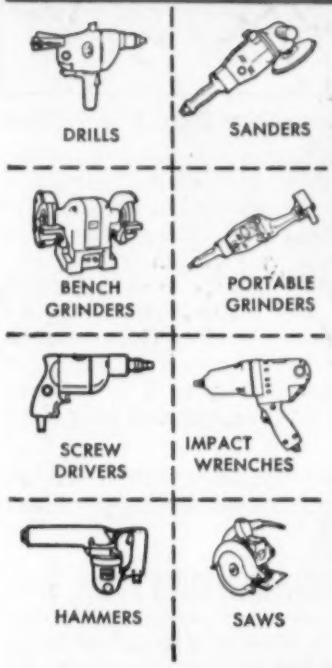
TRY NoDRIP—Apply NoDrip to a small area, compare the results with uncovered portions

Send for NoDrip Handbook

J. W. MORTELL CO.
526 BURCH ST. KANKAKEE, ILL.

For more details circle NED-6035 on enclosed inquiry slip

"Van Dorn" POWER means LOWER COSTS!



YOU NAME the job and there's a Van Dorn Tool to help you do it better, faster, at lower cost! You have your choice of over 100 Tools. . . every one easy to handle, quality-built for top performance and long life. See your Van Dorn Distributor for full details. Write for free catalog to: THE VAN DORN ELECTRIC TOOL Co. 762 Joppa Road, Towson 4, Md.

For Power Specify "Van Dorn"

Portable Electric TOOLS
Div. of Black & Decker Mfg. Co.

For more details circle NED-6036 on enclosed inquiry slip

. . . the Superiority of A-F ENGINEERING

A simplified method of moving finished TV sets from the production line to selected A-F Belt Conveyors running to and from testing booths to storage or shipping docks . . . and keeping the aisles clear by moving the assemblies overhead on A-F Trolley Conveyors . . . reduced costs for this television manufacturer. For information regarding modern products-handling methods, write today.

THE ALVEY-FERGUSON COMPANY
37 Disney Street *Established 1901* Cincinnati 9, Ohio
Offices or Representatives in Principal Cities—Coast to Coast

CONVEYING EQUIPMENT
Alvey-Ferguson
WASHING MACHINES FOR INDUSTRY

For more details circle NED-6037 on enclosed inquiry slip

TAMP
TRUCK OVER
NO WAIT FOR DRYING

HERE'S THE QUICKEST, BEST WAY TO PATCH BROKEN FLOORS

New plastic repair material is ready for traffic almost the moment it's put down. Simply shovel INSTANT-USE into the hole or rut—tamp—and your floor is restored to solid smoothness . . . back in service without delay. Tough INSTANT-USE bonds tight to old concrete, makes long-lasting heavy duty patch or complete overlay. NOT! Plasticizer makes INSTANT-USE easy to scoop out of container . . . easy to level, to tamp, to use!

MAIL COUPON for FREE TRIAL OFFER and HAND BOOK OF BUILDING MAINTENANCE

INSTANT-USE

FLEXROCK COMPANY (Offices in principal cities)
3603 Filbert St., Philadelphia 4, Pa.

Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and HAND BOOK OF BUILDING MAINTENANCE —no obligation. (Clip and attach Coupon to Co. letterhead).

Name .....
Company .....
Address .....

For more details circle NED-6038 on enclosed inquiry slip